

F. Ryan Keith
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June 16, 2003

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**PRIVILEGED AND CONFIDENTIAL
ATTORNEY-CLIENT COMMUNICATION**

VIA HAND DELIVERY

Jeffrey Schmidt
3003 Van Ness Street, N.W., #W406
Washington, D.C. 20008

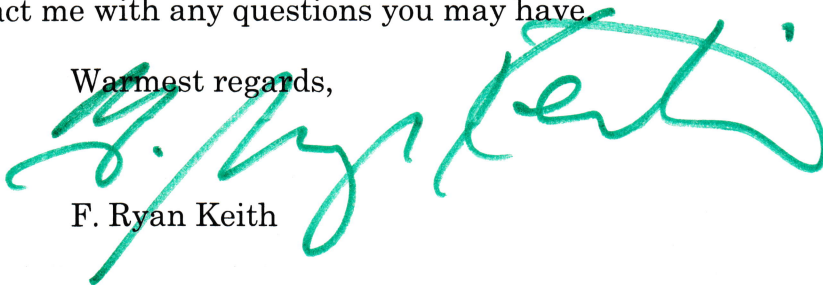
Re: Return of Fact Documents From Your File

Dear Jeff:

As you requested, enclosed are copies of the various "fact documents" included in our files for your matter, which include the documents that WALA provided, as well as documents that you provided and documents that we collected ourselves, largely from your website at www.disciplinedminds.com.

Please do not hesitate to contact me with any questions you may have.

Warmest regards,



F. Ryan Keith

Enclosures

Jeff Schmidt
Contents of Disciplined-Minds.com

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Tab 2 Protests

Tab 3 Readers' Comments

Tab 4 From the Book

Tab 5 Author Interviews

Tab 6 Reviews



Welcome to the DISCIPLINED MINDS Web Site!

Who are you going to be? That is the question.

In this riveting book about the world of professional work, Jeff Schmidt demonstrates that the workplace is a battleground for the very identity of the individual, as is graduate school, where professionals are trained. He shows that professional work is inherently political, and that professionals are hired to subordinate their own vision and maintain strict "ideological discipline."

The hidden root of much career dissatisfaction, argues Schmidt, is the professional's lack of control over the political component of his or her creative work. Many professionals set out to make a contribution to society and add meaning to their lives. Yet our system of professional education and employment abusively inculcates an acceptance of politically subordinate roles in which professionals typically do not make a significant difference, undermining the creative potential of individuals, organizations and even democracy.

Schmidt details the battle one must fight to be an independent thinker and to pursue one's own social vision in today's corporate society. He shows how an honest reassessment of what it really means to be a professional employee can be remarkably liberating. After reading this brutally frank book, no one who works for a living will ever think the same way about his or her job.

"I have been waiting a long time for someone to write this book, and Jeff Schmidt has done it. He exposes, in crystal-clear prose, the inevitably political nature of the professional in our society, and, most importantly, suggests a strategy for resistance. This is an extraordinary and valuable piece of writing."

JEFF SCHMIDT

-- Howard Zinn,
Author of *A People's History
of the United States*

"A radical, disturbing, and provocative look at professional life. It offers a profound analysis of the personal struggles for identity and meaning in the lives of today's 21 million professionals. The book will shake up readers."

-- Andi O'Connor
Ohio University

"A witty, incisive, original analysis of the politics of professionalism -- especially with respect to those fields in which professional training involves an education in how to become oblivious to the political role of one's profession."

-- Michael Berube,
University of Illinois

"A blistering critique of how knowledge workers have been subordinated in America. Finally, a book that tells it like it is."

-- Stanley Aronowitz,
Author of *The Jobless Future*

"This book should be read by anyone thinking about embarking on a professional education in any field, as well as by those who wonder why their dream job doesn't seem so dreamy after all."

-- Politics and Prose bookstore,
Washington, D.C.

***Physics Today* fires author for writing *Disciplined Minds*...**

**More than 750 scientists and others protest firing.
Noam Chomsky helps solicit signatures.**

**Majority of physics academic staff at University of
Ottawa condemn firing**

Protests force *Physics Today* to reveal its unsound case...

*** CEO Marc Brodsky issues statement**

*** Physicists reject Brodsky's arguments**

Press release from the book's publisher

Lingua Franca magazine report

Chronicle of Higher Education report

Sixteen former Physics Today staff members protest firing

State rejects Physics Today's charge of employee misconduct

National Writers Union protests firing

Albert Einstein -- Time Thief!

From *Writer's Bloc Online* (National Writers Union, D.C. Local)

Washington Post item

Physics Today hires notorious union-busting law firm
From *ScienceWriters* (National Association of Science Writers)

Reviews...

Education Review

and

The Adjunct Advocate

Z Magazine

and

Sex and Guts magazine

Washington City Paper

Radical Teacher

Processed World (see pages 93-94 in pdf file)

Workplace

Business and Society Review

Nature, Society, and Thought

Frontline (India)

Self-University Newsletter

Texas Observer

Higher Education Review (England)

Social Anarchism (31)

Interchange: A quarterly review of education
(32/2)

Public Citizen News recommended reading

Politics and Prose pick list

Write the author: jeff@disciplinedminds.com

Publisher: Rowman & Littlefield Publishers Inc.
Cloth / 304 pages / April 2000 / ISBN 0-8476-9364-3
Paperback / 304 pages / December 2001 / ISBN 0-7425-1685-7

Chronicle of Higher Education article

[illegible]

Click Here or on the button below to go to the book's listing at Amazon.com.



**DISCIPULI
MUNDOS**

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Y NATURAL
EN SU LINGUA
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2004-2005

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Use *Disciplined Minds* in your courses and provoke your students to question some of their most basic assumptions!

<http://disciplinedminds.tripod.com/>

sociology, education, business, labor studies, STS (science, technology and society) and many other subjects.

Examination copy

For immediate release...

HUNDREDS OF PHYSICISTS AND OTHER SCHOLARS DEMAND REINSTATEMENT OF PHYSICIST FIRED FOR WRITING BOOK

More than 750 scientists and other scholars in a wide range of fields have condemned the American Institute of Physics for firing *Physics Today* magazine staff editor Jeff Schmidt over his book, *Disciplined Minds* (Rowman & Littlefield Publishers). Among the protesters signing letters delivered on 14 January 2002 are two Nobel Prize winning scientists and more than 500 physicists -- the largest number of physicists ever to speak out on a freedom-of-expression issue in the United States.

The protesters have written a flurry of letters demanding that the magazine reinstate Schmidt, who was fired after 19 years on the job a few days after officials at *Physics Today* and the American Institute of Physics, which publishes the magazine, saw his book. *Disciplined Minds* is about the politics of professional work, and uses the education and employment of physicists to illustrate its points. The origin of job dissatisfaction, argues Schmidt, is employers' insistence on exclusive control over the political aspects of the work, and the subordination of the vision of those who actually do it.

The details of the case are explained in an appeal to scientists by three professors of physics and in a statement by two former *Physics Today* staff members. (See the appeal appended below.) The appeal resulted in a protest letter signed by more than 540 individuals, mainly physicists. About 100 individuals, mainly physicists and former *Physics Today* staff members, drafted other letters blasting the magazine for its repressive behavior and likewise demanding Schmidt's reinstatement. Massachusetts Institute of Technology linguist and social critic Noam Chomsky helped to solicit signatures on another protest letter, which has been signed by about 150 scholars and others at institutions across the country, in a wide variety of fields outside of the sciences.

Ironically, the American Institute of Physics is governed by the American Physical Society and other physics organizations that often speak out publicly when dissident physicists outside the United States are punished for expressing their views.

All of the group and individual letters, along with the names and affiliations of the more than 750 signers, are posted on the Web at <http://disciplined-minds.com>.

The protests forced the American Institute of Physics to break its silence and issue a very revealing public statement, which is posted on the Web at <http://disciplined-minds.com> -- along with a response by physicists Talat Rahman of Kansas State University, George F. Reiter of the University of Houston, Michael A. Lee of Kent State University, and Denis G. Rancourt of the University of Ottawa.

The protesters include scientists from 34 countries: Argentina, Australia, Austria, Bahrain, Belgium, Brazil, Bulgaria, Canada, Denmark, England, Finland, France, Germany, Greece, India, Israel, Italy, Japan, Mexico, The Netherlands, New Zealand, Peru, Poland, Portugal, Puerto Rico, Russia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United States, Yugoslavia -- and, in a turn of the table on free-expression, Cuba.

Contact: SpeechRights@aol.com

THE APPEAL...

Dear fellow scientist,

As you may have heard, *Physics Today* magazine recently gave a very punishing review to a book written by physicist Jeff Schmidt: The magazine fired him.

Jeff was a staff editor at *Physics Today* for 19 years -- until his supervisors saw *Disciplined Minds*, a thought-provoking critique of workplace hierarchy and the politically subordinate role of salaried professionals. The book uses physicists and physics graduate school to help illustrate points about professionals and professional training in general.

Within days of learning about his irreverent book, the higher-ups at *Physics Today* dismissed Jeff summarily, apparently using the book as an opportunity to retaliate against him for his workplace activism and to ignore his widely praised work for the magazine. Details of Jeff's firing are given in the attached statement by two former *Physics Today* staff members.

Please join us in protesting Jeff's dismissal, by adding your name to the attached letter. We will send the letter to Marc H. Brodsky, Executive Director and CEO of the American Institute of Physics, which publishes *Physics Today*, and we will also post it on the Web.

To add your name to the letter, please send an e-mail message to SpeechRights@aol.com. Include your name and an affiliation, such as your department and institution. Please ask others to add their names, too.

You can also write directly to Marc Brodsky, at brodsky@aip.org. If you do, please send a copy of your letter to SpeechRights@aol.com so that it can be posted on the Web.

Your support will make a big difference.

Sincerely,

Talat Rahman
Fellow of the American Physical Society

**University Distinguished Professor
Department of Physics
Kansas State University**

**George F. Reiter
Professor of Physics
University of Houston**

**Michael A. Lee
Professor of Physics
Kent State University**

14 January 2002

Background info about Jeff Schmidt and *Disciplined Minds*

By Chris Mohr and Marlowe Hood
Former *Physics Today* staff members

In *Disciplined Minds*, Jeff Schmidt challenges professionals to view their role in society in a new and unsettling way. He argues that professional work has both technical and political components, and that salaried professionals are expected to be technically creative but politically subordinate. Such subordination does not occur without a fight, the book maintains, and so the workplace becomes a battleground for the very identity of the individual, as does graduate school, where professionals are trained.

Jeff has a PhD in physics from the University of California, Irvine, and he draws many of his examples from the predicament of employed physicists and physics graduate students. (In one chapter, he examines the physics PhD qualifying examination and shows how the ostensibly value-neutral test can identify candidates who will likely have a compliant attitude toward their employers.) His book details the battle one must fight to be an independent thinker and to advance one's own social vision in today's corporate society. It offers practical advice on how to make employment more than an exercise in knowing your place, and how to make graduate school more than an abusive "intellectual bootcamp" that breaks the individual in to playing a conventional role. You can avoid the cynicism and intellectual timidity that afflicts so many professional employees, he says, but doing so is not easy, and he discusses how it can be done.

While at *Physics Today*, Jeff played the most prominent role in staff efforts to improve working conditions, increase staff participation in decision-making, and broaden the range of viewpoints allowed in the magazine. He also led an effort to force *Physics Today* to live up to its advertised claim of being an affirmative-action employer, noting that the magazine was hiring and training only whites as editors, a pattern that eventually left the magazine with an all-white staff of 16 professionals and a non-white secretarial staff of 3.

In firing Jeff, the managers at *Physics Today* cited a statement, at the beginning of *Disciplined Minds*, that he had spent "some office time" writing the book. That constitutes "misconduct," they said. Jeff's colleagues, however, saw this charge more as a pretext to get rid of someone who was persistently pressing for changes in workplace policies. Indeed, the fact that the magazine's managers dismissed Jeff after so many years of service not only without a hearing, but also without asking him a single question about his work on the book, suggests that they were looking for an opportunity to remove him.

By the time *Disciplined Minds* was published, *Physics Today*'s managers had already tried unsuccessfully to silence Jeff with measures just short of dismissal. At one point, for example, they put gag orders on Jeff and another outspoken staff editor, warning that they would be fired if they said anything "counterproductive." These orders were eventually lifted due to pressure from coworkers. *Physics Today* even banned private conversations in the workplace, announcing that all conversations between staff members must be open to monitoring by managers. Jeff was not alone among his colleagues in finding these measures repressive.

The managers at *Physics Today* apparently thought the book would be perceived as so provocative that no one would object if they fired Jeff. They were wrong. Those lodging protests to date include sixteen former *Physics Today* staff members (including us), the National Writers Union, and 160 scholars, writers and educators in a wide range of fields. Even the State of Maryland, after an unemployment benefits hearing, rejected AIP's charge that Jeff's work on the book at the office constituted misconduct, finding that *Physics Today* fired Jeff without evidence that his spare-time writing interfered with his

work for the magazine. (During the years that Jeff was writing *Disciplined Minds*, *Physics Today* gave him two promotions and 19 salary increases based explicitly on the quantity and quality of his work for the magazine.) Details of the state investigation are posted on the Web at <http://disciplined-minds.com>, along with the protest letters, reports in the press and reviews of the book.

Physics Today has hired what union activists and labor lawyers describe as the most notorious union-busting law firm in the country (Jackson, Lewis, Schnitzler & Krupman) to deal with any legal challenges in this case. That's revealing, but it doesn't mean that the law is a likely source of justice for Jeff. The law generally favors employers, and so Jeff's best chance for justice is support from the physics community.

(The above is based on information from Jeff and other former *Physics Today* employees, and on relevant documents.)

**STATEMENT BY MARC H. BRODSKY, CEO AND EXECUTIVE DIRECTOR
OF THE AMERICAN INSTITUTE OF PHYSICS, PUBLISHER OF *PHYSICS*
TODAY MAGAZINE**

Dear _____,

I am writing in response to your recent inquiry regarding the circumstances surrounding Jeff Schmidt's termination. Since legal proceedings are pending in response to Mr. Schmidt's claims, I am providing only a brief statement of AIP's position. At the outset, please note that there has been no finding that the discharge of Mr. Schmidt violated any federally protected right. AIP is not involved in similar legal proceedings with any other incumbent or former employee. Also, I personally assure you that Mr. Schmidt's termination had nothing to do with the subject matter of his book.

Some who have written to me, made reference to APS. APS was not Mr. Schmidt's employer. AIP was.

Mr. Schmidt was discharged by AIP after he stated, in the introduction to his book, that it was written on "stolen time." To me, the reference to writing it on "stolen time" either meant or implied that he wrote the book on paid work time, when, in my opinion, he should have been devoting his energies to AIP. In brief, while being paid by AIP, Mr. Schmidt's comment communicates, in our view, that he was pursuing activities beyond what he was supposed to be doing on work time.

AIP supports the right of all employees to seek guidance from the U.S. Equal Employment Opportunity Commission, the National Labor Relations Board or any other government agency to present questions regarding their employment or the termination thereof. AIP firmly believes that it has not engaged in any improper behavior. To date, no agency has found that AIP violated any law. In fact, below I quote from the findings of the NLRB, which dismissed Mr. Schmidt's unfair labor practice charge.

"The evidence in this regard indicates that Mr. Schmidt had a non-work related book published which contained an introduction with the following words: 'This book is stolen. Written in part on stolen time, that is. I felt that I had no choice but to do it that way....'"

The NLRB also rejected Mr. Schmidt's contention that he did not actually "steal" company time, but "merely engaged in literary hyperbole in his book introduction." The NLRB found that:

"given the nature of the work involved in this matter, it was concluded that the Employer has some justification for taking Mr. Schmidt at his word rather than treating this as a mere literary device to catch the interest of a reader. Moreover, and most significantly, even if Mr. Schmidt did not actually work on his book project on company time, by asserting that he did, he served to undercut Employer's efforts at enhancing employee productivity."

I hope that you find these brief remarks to be responsive to your questions and concerns. I hope you can appreciate our position. AIP is committed to the physics community and to its members. As an employer, we try to act appropriately. We are proud of our work atmosphere and the high morale of our employees. Thank you for your interest.

Marc Brodsky
August 31, 2001

[Physicists reject this statement]

A response to Marc Brodsky...

PROTESTS FORCE *PHYSICS TODAY* TO REVEAL ITS UNSOUND CASE

For many months after *Physics Today* fired Jeff Schmidt over his book *Disciplined Minds*, the magazine refused to respond to, or even acknowledge, the many letters of protest it was receiving. Then, in August 2001, as pressure mounted, Marc Brodsky, head of the American Institute of Physics, which publishes *Physics Today*, mentioned to some concerned physicists that "AIP may be forced to issue a public statement." A week later, the American Institute of Physics finally broke its silence.

Some people had given *Physics Today* the benefit of the doubt, figuring that there must be some unstated compelling reason why Jeff deserved to be fired. Brodsky's statement should provide an assurance that no such reason exists.

Moreover, a close look at Brodsky's statement points to the real reasons for Jeff's dismissal — namely, the critical nature of his book and his history of workplace activism. Far from justifying AIP's actions, Brodsky's statement verifies in many ways that the Institute's behavior in this case has been unacceptably out of line with the values and expectations of the community that it is supposed to serve and represent to the world:

1. Brodsky claims that he fired Jeff on the sole basis of the opening lines of *Disciplined Minds*, in which Jeff dramatizes the fact that he wrote the book in part at the office. But Brodsky knows that AIP employees engage in a wide variety of spare-time activity at work — chatting with coworkers, writing personal e-mail, making personal phone calls, surfing the Web and so on — and he has never punished anyone for that, or even discouraged it. Yet he says he fired Jeff for "pursuing activities beyond what he was supposed to be doing on work time," or, if not actually that, then at least "asserting that he did." Jeff received much praise for his work at *Physics Today*, from his supervisors, from the authors of the articles he edited and from members of the physics community. What made his workplace activities beyond his assignments grounds for firing, if not the critical nature of those activities?
2. Brodsky claims that Jeff's "termination had nothing to do with the subject matter" of his book. But then he approvingly quotes the National Labor Relations Board's explanation that it is an assessment of the book as a whole — a view of "the nature of the work involved in this matter" — that allows AIP to read the book's introduction in a way that justifies firing Jeff.
3. Brodsky's emphasis on his legal right to fire Jeff misses the point. "No agency has found that AIP violated any law," boasts Brodsky. But the hundreds of physicists and others who are speaking out in this case aren't saying that Jeff's dismissal was illegal, but rather that it violated the physics community's norms of tolerance for differing viewpoints, norms that are essential for the community's functioning and credibility.

Brodsky cites the National Labor Relations Board as the authority in this case. However, the NLRB's sole mission is to determine whether there has been a violation of the National Labor Relations Act of 1934, which made employee organizing a legally protected activity but did not protect book writing. The NLRB is not the appropriate body to determine what is right or wrong for the physics community, nor is any other government agency or court.

4. It's surprising that Brodsky would even mention the NLRB, because, as he himself must know, the agency's investigation found *Physics Today* to be a repressive and vengeful employer. Brodsky hides this fact by quoting very selectively from the NLRB's findings, focusing on employer rights. He does not quote the findings most relevant to the concerns of the physics community and others who value free expression. The findings were reported by NLRB General Counsel Arthur F. Rosenfeld — a former U.S. Chamber of Commerce lawyer appointed by George W. Bush and no friend of workplace organizers and activists. According to Rosenfeld...

"The evidence adduced during the Regional Office investigation established a prima facie case that Charging Party Jeff Schmidt was discharged for engaging in protected concerted activities. Thus, the evidence indicated that Jeff Schmidt engaged in extensive protected activity for over a decade, that the Employer had knowledge that Schmidt was engaged in such activity, and that the Employer bore animus towards Schmidt for engaging in such activity."

The "protected activity" here is the workplace organizing that Jeff had been doing.

Rosenfeld also took into account what he called *Physics Today*'s "threats of discipline and other retaliatory conduct in order to discourage employees from discussing working conditions with each other and informing the Employer of their collective concerns." And he noted that such behavior "is conduct violative of the National Labor Relations Act."

Nevertheless, a private corporation in the United States has the legal right to fire an employee for writing a book it doesn't like. So the NLRB concluded that while *Physics Today* may very well have engaged in numerous illegal repressive activities, firing Jeff over the book could not be counted as one of them. With Jeff's firing excluded from the case, the NLRB decided, as a matter of prosecutorial discretion, not to take action on the rest of the case. (The NLRB is not required, and does not have the resources, to prosecute all illegal activity.) Thus *Physics Today* escaped prosecution, but not, as Brodsky implies, because of its exemplary or even legal behavior. A high standard indeed for an organization representing the physics community!

Jeff's book is critical of management and critical of the political subordination of working scientists and other salaried professionals. By firing Jeff, Marc Brodsky, *Physics Today* and the American Institute of Physics, as well as the American Physical Society and the other

organizations that govern AIP, have made it clear that they are more interested in enforcing that subordination than in living up to the physics community's norms of free expression.

AIP's statement is weak and legalistic, and confirms the worst fears of Jeff's many supporters. We ask, more resolutely than ever, that *Physics Today* do the right thing and give Jeff his job back.

**Talat Rahman
Fellow of the American Physical Society
University Distinguished Professor
Department of Physics
Kansas State University
Manhattan, Kansas**

**George F. Reiter
Professor of Physics
University of Houston
Houston, Texas**

**Michael A. Lee
Professor of Physics
Kent State University
Kent, Ohio**

**Denis G. Rancourt
Professor of Physics
University of Ottawa
Ottawa, Ontario, Canada**

14 January 2002

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23 March 2002

PROTEST FROM UNIVERSITY OF OTTAWA, DEPARTMENT OF PHYSICS

To: Marc H. Brodsky
CEO and Executive Director
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740
cc: All member associations of AIP and their presidents

We have recently become aware of AIP's treatment of Jeff Schmidt either:

(1) From the Physics Seminar entitled "Asymptotic Freedom" that Jeff Schmidt gave at the University of Ottawa, Ottawa, Canada, on February 21, 2002,

or

(2) From the public lecture entitled "The Politics of Work" that Jeff Schmidt gave in Ottawa, on February 22, 2002,

or

(3) From the interview with Jeff Schmidt on radio station CHUO on February 20, 2002,

or

(4) From the *Disciplined Minds* website, <http://disciplined-minds.com>,

or

(5) From other sources, including the media, and the book *Disciplined Minds* itself.

We were stunned to learn of Jeff Schmidt's dismissal from *Physics Today*, for political misconduct, after 19 years of service, by an association that has defended the right of free expression by physicists in other countries. We ask that this injustice be corrected without delay.

Ivan L'Heureux
Chair, Department of Physics
University of Ottawa

Marcel A. R. Leblanc
Emeritus Professor of Physics
Fellow of the American Physical Society
University of Ottawa

Gary W. Slater
Professor of Physics
Vice-Dean, Faculty of Graduate and Postdoctoral Studies
University of Ottawa

Xiaoyi Bao
Professor of Physics
University of Ottawa

Richard Hodgson
Professor of Physics
University of Ottawa

Denis G. Rancourt
Professor of Physics
University of Ottawa

Andre Longtin
Physics Associate Professor
University of Ottawa

Liang Chen
Physics Associate Professor
University of Ottawa

Gilles Lamarche
Physics Adjunct Professor
University of Ottawa

Anne-Marie Lamarche
Physics Research Scientist
University of Ottawa

Mei-Zhen Dang
Physics postdoctoral fellow
University of Ottawa

Darryl Roberts
Physics postdoctoral fellow
University of Ottawa

Peter Hargraves
Physics postdoctoral fellow
University of Ottawa

Beena George
Physics postdoctoral fellow
University of Ottawa

Laurette McCormick
Physics graduate student
University of Ottawa

Jose M. Martinez
Graduate student, medical physics
Carleton University, Ottawa

Guillaume Belanger
Physics graduate student
Carleton University, Ottawa

Jason Middleton
Physics graduate student
University of Ottawa

Jean-Paul Prevost
Physics graduate student
University of Ottawa

Sergei Katsev
Physics graduate student
University of Ottawa

Khalid Al-Qadi
Physics graduate student
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Michel Gauthier
Physics graduate student
University of Ottawa

Patrick Mercier
Physics graduate student
University of Ottawa

Nicolas Sabourin
Physics undergraduate student
University of Ottawa

Neil Watanabe
Physics undergraduate student
University of Ottawa

Steven Zhang
Physics/mathematics undergraduate student
University of Ottawa

Elizabeth Inrig
Physics undergraduate student
University of Ottawa

Majorie Theodore
Physics undergraduate student
University of Ottawa

Protests

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[Renowned linguist Noam Chomsky and 145 scholars and others protest firing](#)

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Physicists and others blast *Physics Today*. Read 85 of their letters...

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Niekiletta Woullard

Herbert Zeman

Ellen Zweibel

Denis Cioffi

14 January 2002

541 signers

Please add your name to the letter!
Send your info to SpeechRights@aol.com.

Marc H. Brodsky
Executive Director and CEO
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dear Dr. Brodsky:

As physicists and other scientists concerned about freedom of expression in the science community, we were troubled to learn of your dismissal of Jeff Schmidt, who had been an articles editor at *Physics Today* magazine for over 19 years.

As we understand it, you fired Jeff after you saw his book, *Disciplined Minds*, and in particular after you learned that Jeff had used some of his spare time at the office for critical writing about education and employment in physics and other fields.

While we do not necessarily agree with Jeff's views about the situation of physicists and other salaried professionals, and do not expect you to, we believe that free debate within the physics community is healthy. We expect you to encourage it, not stifle it, especially because physicists are known for speaking out when physicists internationally are punished for expressing their views. Your actions as head of the American Institute of Physics help to shape society's view of the physics community. We urge you to reconsider your decision, and offer to reinstate Jeff as an editor at *Physics Today*.

We ask that you publish this letter in *Physics Today*, to bring our concerns to the attention of the wider physics community.

Sincerely,

(This letter expresses the views of the undersigned;
affiliations are listed for identification only.)

Talat Rahman
Fellow, American Physical Society
University Distinguished Professor
Department of Physics
Kansas State University
Manhattan, Kansas

George F. Reiter
Professor of Physics
University of Houston
Houston, Texas

Michael A. Lee
Professor of Physics
Kent State University
Kent, Ohio

Guillaume Belanger
Department of Physics
Carleton University
Ottawa, Canada
24 August 2001

Marc Brodsky (via e-mail)
CEO and Executive Director
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dr. Brodsky,

I find this hard to believe...

The efforts that Jeff Schmidt must have exerted in order to accomplish the task of a full time, productive and highly qualified editor of *Physics Today* while writing a book on important issues that will inevitably help in bringing more openness and democracy as well as illuminating some of the inadequacies and injustices that exist at all levels of society and in particular in the Science community, should be rewarded and encouraged. Not used as the grounds for dismissal.

If more people had the intellectual capacity and motivation that allowed Jeff Schmidt to do what he did, the Science community and the whole of society, would most likely be functioning in a much more sustainable, democratic and productive fashion.

I find it tremendously unfortunate and truly unacceptable that Dr. Jeff Schmidt's exemplary conduct should be regarded as offensive and be severely reprimanded when in fact it should be rewarded and encouraged.

Regretfully,

Guillaume Belanger

Dr. James C. Owens
Senior Fellow
Torrey Pines Research
Past President
Society for Imaging Science and Technology
Member, Executive Committee, New York State Section
American Physical Society
29 August 2001

Marc H. Brodsky (via e-mail)
CEO and Executive Director
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dear Dr. Brodsky:

I was very disturbed to read the email from SpeechRights about your firing of Jeff Schmidt.

My career and my father's have both been in physics — he was an APS member since the late 1920's (his obituary appears in the latest issue of *Physics Today*) and I have been a member and participant since 1961.

My conception of the APS and AIP has been that they have been since their beginnings intellectually open, exploratory seekers after fundamental truth, primarily physical truth, but expanding into areas beyond that when required or appropriate. The APS special reports on salaries and careers, for example, are entirely appropriate studies of the current state of reality, however frustrating to basic scientists they may be. Although I recognize that growth into a major professional society and interactions with the federal government in WWII have given rise to seductive pressures for accommodation in order to receive funding, sometimes in clear opposition to the independent search for truth and understanding, I had still assumed that the APS and AIP would be open to unconventional and nonconformist searches for reality rather than kowtowing to political pressure and suppressing alternative ideas. My thesis advisor, Nicolaas Bloembergen, joined with others in opposing the overenthusiastic and technologically illiterate Star Wars program; I gave a talk at the Lasers '87 meeting in Lake Tahoe when Kumar Patel and others continued the battle, still as underdogs, against the demagoguery of Edward Teller and his military opportunist supporters.

Jeff Schmidt's analysis, as described in the 8/24/01 email from SpeechRights, sounds to me entirely realistic, and consonant with the pressures, however subtle, I have found in my own career.

I am disturbed and even disgusted at your actions, and trust that you will explain them to me and show that they are not simply the mindless reaction of an entrenched and supplicant Washington bureaucracy, which is certainly how they appear. I would expect the APS and AIP to be principled investigators and enlightened searchers for truth, not merely suppressors of all viewpoints that do not support the machinations of Washington as the ultimate source of "truth," however transient.

James C. Owens

10 January 2002

146 signers

Linguist and social critic Noam Chomsky helped to solicit the signatures on this open letter. To add your name, send your info to letter@disciplined-minds.com

To: Marc Brodsky, Executive Director
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dear Dr. Brodsky:

As individuals concerned with freedom of expression and freedom to organize, we were dismayed to learn of your recent dismissal of Jeff Schmidt, who had been an articles editor at Physics Today magazine for over 19 years. We urge you to reconsider your decision.

As we understand it, you fired Jeff after you saw his book, Disciplined Minds, and in particular after your discovery that Jeff used some of his spare time at the office for critical writing. You were evidently not deterred by the fact that during the years that Jeff was writing the book, Physics Today gave him two promotions and 19 salary increases based explicitly on the quantity and quality of his work for the magazine, which it scrutinized closely.

The fact that you dismissed Jeff after so many years of service not only without a hearing, but also without asking him a single question about the book or anything else, suggests that you were looking for an opportunity to get rid of him. Indeed, we understand that you were displeased with Jeff's workplace activism and had tried to silence him through a number of very repressive measures short of dismissal.

As you know, Jeff worked with other Physics Today staff members to improve working conditions, increase staff participation in decision-making, broaden the narrow range of viewpoints allowed in the magazine, make the salary structure fairer and diversify the staff. (At the time you fired Jeff, Physics Today's large editorial staff was all white above the secretarial level.)

Because you are the head of the American Institute of Physics, your repressive actions harm the reputation of physicists. Worse, your actions discourage free expression and organizing, and thereby work against democracy and social progress. We ask you to take a step toward undoing the damage you have done. Give Jeff his job back.

Sincerely, (affiliations listed for identification only)

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For Immediate Release
Contact: Nancy Rothschild
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JOURNALIST FIRED FOR WRITING RADICAL BOOK

When Jeff Schmidt's supervisors at Physics Today magazine saw his new book on the politics of work, they hustled the 19-year employee out of the building and told him never to come back "at any time, for any reason." They were less than pleased by the insubordinate tone of DISCIPLINED MINDS: A CRITICAL LOOK AT SALARIED PROFESSIONALS AND THE SOUL-BATTERING SYSTEM THAT SHAPES THEIR LIVES (ISBN 0-8476-9364-3; 304 pages; \$26.95 cloth; distributed by National Book Network).

The magazine, which is published by the American Institute of Physics, deemed it unacceptable that Schmidt had used his spare time at the office to work on the book, forgoing more common workplace diversions such as surfing the web, playing computer solitaire and making personal phone calls. In fact, to set a subversive tone, Schmidt opens his book with a dramatic statement about its origin. With a nod to Abbie Hoffman's 1971 classic, Steal This Book, DISCIPLINED MINDS begins, "This book is stolen. Written in part on stolen time, that is."

Schmidt continued to do his job while he was writing the book, and he always received above-average or satisfactory performance ratings. But in firing him on May 31, the managers said the book shows that he was not "fully engaged with the magazine." "In fact you were stealing from the magazine...in order to write your book," Schmidt's supervisor told him.

"Writing personal e-mail on company time is not likely to get you fired," Schmidt says. "But writing something radical on company time is a different story." Schmidt sees his firing as further proof of the book's thesis -- that management's paramount concern is always the political content of the work -- even spare-time work. Because of the economics of intellectual life in corporate America, "most books are written in part on stolen time," says Schmidt. "But this book -- because it is a radical look at work itself -- says so openly, for dramatic effect."

Schmidt sees his firing as a threat to "the right to write." "Employers, especially employers of journalists, traditionally are tolerant of employees who are writing books, so long as they continue to do their jobs," he notes. Ironically, at the time of his firing, Schmidt was two months ahead in his work and was hoping to take a vacation, having just completed his annual work quota in ten months' time.

He is asking for his job back.

FIELD NOTES

Stealing Time

HOW SERIOUSLY SHOULD one take the chest-thumping rhetorical flourishes of a manifesto?

Abbie Hoffman may have urged his readers to "steal this book," but surely he might have conceded that yeah, okay, he was counting on royalties. Similarly, when Jeff Schmidt pays homage to Hoffman by kicking off his recent book with the sentences "This book is stolen. Written in part on stolen time, that is," he doesn't mean it literally.

Or does he? His bosses thought so. The question now lies at the heart of a dispute between Schmidt and his former employers at *Physics Today*, a 121,000-circulation magazine published by the American Institute of Physics in College Park, Maryland.

In *Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives* (Rowman & Littlefield), Schmidt assails the conformity that professional life demands and offers some self-help-ish tips to those sweating in their white collars. After the attention-grabbing opening line, he goes on to explain what he means by "stolen time": "Like millions of others who work for a living...my job simply didn't leave me enough energy for a major project of my own.... So, I began spending some office time on my own work, dumped my TV to reappropriate some of my spare time at home, and wrote this book." Soon after his bosses read that, Schmidt says, they marched him to the human-resources office, had someone retrieve his personal effects, and told him that they never wanted to see him again. It was clear, they said, that he wasn't "fully engaged" in his work.

Since that unhappy day, physicists and journalists have rallied around Schmidt to try to help him get his job back. He insists he's been canned for workplace activism and the "attitude crime" of writing a subversive book. Although he adopts a rebellious stance in his book—and describes himself as a political radical—he is a good worker, he insists. He has also taken a few baby steps away from the bold claims in his introduction. "They have a one-hour unpaid lunch period and a total of a half hour of break time," Schmidt explains. "When I was working on the book during paid break time, it *felt* as though I was working on stolen time." The publisher of *Physics Today*, Randolph Nanna, and the human-resources director of the American Institute of Physics declined to comment on the case. But if the "stolen time" claim was the sole reason for letting Schmidt go, the incident raises an interesting question: Can you fire an employee for what he claims to have done, without checking to see if he's bluffing?

Disciplined Minds has more to do with academia than you'd guess from its subtitle. Inveighing against the injustices visited upon salaried professionals, Schmidt takes his own profession, physics, as his main case study. He recalls that, in 1980, the head of his graduate adviser's research group at the University of California at Irvine wanted Schmidt's dissertation typed up on a rush order, just to get rid of him—Schmidt had apparently stirred up too much trouble with his criticisms of nuclear-weapons programs and his advocacy on behalf of another student who had flunked out. The high rate of attrition in physics especially caught his attention. "What I noticed was that the dropout rate was not politically neutral," he says. "To put it bluntly, the program favored ass kissers." As does all professional training, he might add. And exposure to such pressures leads to political conformity: He claims that in 1972, the most

educated Americans were the most likely to oppose withdrawal from Vietnam.

Yet do not despair, says this veteran of the 1960s (Schmidt is fifty-four), whose book is adorned with glowing blurbs from Howard Zinn, Stanley Aronowitz, and Michael Bérubé: One can carve out space for freethinking. He urges readers to lose their hunger for compliments from superiors and to "pursue your own goals while supposedly pursuing your employer's goal." Other proposals are more out there: He reprints an army manual for surviving as a prisoner of war, with the suggestion that readers mentally "substitute 'graduate or professional school' for 'PW camp.'"

Schmidt apparently put some of these suggestions into practice. At *Physics Today*, he argued vociferously for such reforms as the elimination of salary inequities among editors and the hiring of members of minority groups. In 1997, after he refused to pipe down at a company retreat, he was warned, in writing, that his "destructive and counterproductive" behavior would no longer be tolerated. In the last couple of years, his performance evaluations were downgraded from superior to satisfactory, he says, yet he insists he stayed ahead of schedule on his work. "He was their best articles editor before they fired him," says Jean Kumagai, who left *Physics Today* last year for *IEEE Spectrum*, an engineering magazine in New York.

So far, the American Institute of Physics has not been moved by Schmidt's pleas, nor by supportive letters from his friends and colleagues. Maryland's Department of Labor, however, sided with him in one important matter, granting him unemployment benefits. The agency concluded that the AIP had presented insufficient information to show that his actions constituted misconduct. According to Michael Gottesman, a specialist in labor law at the Georgetown University Law Center, however, that victory won't give Schmidt much leverage in court should he decide to sue for wrongful dismissal. States are required to prove a former employee guilty of egregious misconduct before they can deny unemployment benefits. But as an at-will employee, lacking a contract, Schmidt can be fired for any reason not barred by an employment discrimination statute—even, theoretically, for writing a dull book, not just a controversial one.

But if Schmidt did snatch a few minutes here and there to work on his book, he notes that there are compelling precedents in physics for such petty larceny. Where would physics be if Albert Einstein hadn't stolen a few moments from the Swiss Patent Office, where he was employed when he worked out the implications of relativity?

Christopher Shea

HOT TYPE

***Physics Today* Fires Author of Book on 'Soul-Battering System' of the Workplace**

By JEFF SHARLET

DISCIPLINE THIS: **Jeff Schmidt** says his employers at *Physics Today* disliked his new book, *Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives* (**Rowman & Littlefield**), so much that they decided to discipline *him*. In fact, they fired him.

Mr. Schmidt believes the trouble began after his boss, **Stephen G. Benka**, caught a co-worker reading an item about the book in Hot Type ("Steal This Book," May 26). "She was laughing out loud when my boss came along and asked, 'What's so funny?'" says Mr. Schmidt. Apparently, Mr. Benka was not amused by Mr. Schmidt's statement, quoted from the book, that he'd written *Disciplined Minds* partly on time stolen from work.

"He read it right there, but he didn't laugh," says Mr. Schmidt.

The following Wednesday, May 31, Mr. Benka asked him to join the publisher, **Randolph A. Nanna**, for a trip to the human-resources department. There a human-resources professional told him that he was being "terminated with cause" after 19 years at the magazine, during which Mr. Schmidt says he'd consistently received above-average or satisfactory evaluations. Then he was escorted out of the building without being allowed to return to his office.

Neither Mr. Nanna nor Mr. Benka would comment. **Theresa C. Braun**, director of human resources for the nonprofit American Institute of Physics, which publishes the magazine, said only that Mr. Schmidt "was not terminated because of the [*Chronicle*] article, nor because of the general content of the book."

Mr. Schmidt, who earned a Ph.D. in physics from the University of California at Irvine, says they told him that the very existence of the book was evidence that he wasn't "fully engaged" at *Physics Today*.

In fact, Mr. Schmidt's book argues that it is impossible to be "fully engaged" in a hierarchical institution, an argument that would hardly strike most people as new or shocking. The strength of the book, according to its supporters, lies in its humor and its detailed examination of the particularities of professional life.

"A witty, incisive, original analysis of the politics of professionalism," wrote **Michael Berube**, an English professor at the University of Illinois at Urbana-Champaign, in a jacket blurb. "Finally, a book that tells it like it is," wrote **Stanley Aronowitz**, a sociologist at the City University of New York.

Or now, for Mr. Schmidt, how it was.

21 June 2000

To: Marc Brodsky, Executive Director
American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dear Dr. Brodsky:

We were dismayed to learn of the recent dismissal of Jeff Schmidt, who had been an articles editor at Physics Today magazine for over 19 years. As former employees of the magazine, we urge you to reconsider your decision.

As we understand it, Jeff was fired after the publication of his book, *Disciplined Minds*, and in particular after AIP managers heard about the book's opening lines: "This book is stolen. Written in part on stolen time, that is." According to Jeff's supervisor, Stephen Benka, this intentionally provocative statement proved that Jeff was not "fully engaged" at the magazine.

Under different circumstances, we might find some humor in the fact that Jeff's declaration, obviously made for dramatic effect, would create such a stir. But there's much more at stake here: you have chosen to deprive Jeff of his livelihood. We take deep exception to that.

Whether Jeff -- or, for that matter, anybody else at Physics Today -- was "fully engaged" is really immaterial. What counts, or what should count, is that Jeff did his work for the magazine, and AIP invariably gave him above-average or satisfactory ratings in his performance reviews. Your recent discovery that Jeff used his spare time for critical writing, rather than surfing the Net, exchanging personal e-mail, or other common diversions, shouldn't be cause for punitive action. It's also worth noting that the use of one's spare time at the office to work on a book is a time-honored tradition among journalists. Indeed, many employers encourage it, recognizing that it boosts the professional standing of their employees and enhances the reputation of the organization.

We have all worked with Jeff, and we know him to be a talented and conscientious editor. While at Physics Today, we benefited from his camaraderie, support, and good ideas. Authors who worked with Jeff, as well as PT staff members themselves, will tell you that Jeff performed his duties with admirable skill and efficiency. He is a clear, careful journalist, and he has a deep interest in physics and in

the social issues surrounding it. What is more, he worked hard to improve the work environment at the magazine. Physics Today has been a better place for his presence.

It is our strong belief that you erred in firing Jeff. We therefore urge you to give him his job back.

Respectfully,

Names Withheld

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(Paris, France)
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(Queens, New York)
(Brooklyn, New York)
(Brooklyn, New York)
(Bellport, New York)
(Brooklyn, New York)
(Burlington, Vermont)

Jeff Schmidt
27 July 2000

State Rejects *Physics Today's* Charge of Employee Misconduct

The State of Maryland Department of Labor conducted a surprisingly detailed investigation into the circumstances under which *Physics Today* fired me. On 26 June 2000 the department issued its "determination," rejecting the magazine's claim that I engaged in misconduct on the job by writing *Disciplined Minds*.

The investigation was prompted by my request for unemployment benefits. Eligibility for such benefits is limited to people who lose their jobs "through no fault of their own." So if you quit your job or are fired for misconduct, you may not be entitled to benefits.

An unemployment office examiner explained to me that "some employers send us information and indicate that they do not wish to dispute the claim." *Physics Today* didn't do that. Instead, the magazine sought a ruling in its favor, which would not only punish me further and save the magazine money, but also give the magazine political support in the form of third-party validation of its action against me. Thus, *Physics Today* charged me with misconduct, telling the state that "The employee admittedly used company time to work on a personal project over an extended period of time." The state then had to investigate, to determine independently whether or not I engaged in misconduct.

The centerpiece of the investigation was a hearing that took the better part of an hour, during which I offered a very different theory of why the magazine fired me. I said that *Physics Today* fired me for political reasons -- specifically, management didn't like the radical content of the book and was looking for an excuse to get rid of me because of my workplace activism. Department of Labor examiner Tasha Owens conducted the hearing by telephone. I waived my right to representation, figuring that I could present the facts as well as anyone. Owens interviewed me first, for 28 minutes. To test the company's claim, she asked me questions about how much time at the office I spent writing the book. (Answer: A portion of break time.) To test my claim, she asked me questions about whether or not the company ever asked me how much time at the office I spent writing the book. (Answer: No, they didn't seem to care about that.) At the end of the interview, she scheduled me for a follow-up interview to give me the opportunity to rebut points that *Physics Today* would make in its interview.

However, Owens didn't call at the appointed time, and so I called her and asked why. She said, "There was nothing to rebut." Interestingly, *Physics Today* and I agreed about what I did, and disagreed only about whether or not my actions constituted misconduct. AIP, she said, "gave me the same information that you gave me."

Having gathered the facts, Owens had to make a decision. According to Susan R. Bass, an

administrator in the office of the executive director of Maryland's unemployment insurance program, Owens had three levels of employee misconduct to choose from:

- o Simple misconduct -- Here the fired employee gets "delayed benefits," which begin after a five to ten week waiting period.
- o Gross misconduct -- No benefits.
- o Aggravated misconduct -- No benefits, and reduced eligibility for benefits following subsequent employment.

Owens ruled that my work on the book didn't even rise to the level of simple misconduct, and so she awarded me full benefits, retroactive to 4 June 2000. I will receive up to \$6,500, which the American Institute of Physics, the magazine's publisher, will pay for through increased unemployment insurance premiums.

Physics Today was given the opportunity to appeal the state's finding, but did not do so. If *Physics Today* sincerely believed its own story that it fired me for real misconduct on the job, and not just for political misconduct, it could have -- and I think would have -- appealed. The magazine would have appealed not only to save thousands of dollars, but also to dispel the implication that its motives for firing me weren't squeaky clean.

The hearing was a high-anxiety event because a lot was at stake, both monetarily and politically. Strangely, however, it was also fun, because it was so different from the way I was used to seeing disagreements resolved in the *Physics Today* workplace, where power so often trumps reason (see appendix below for an example). It was a pleasure to speak the truth outside of that repressive hierarchy. The ruling means that *Physics Today* fired me for a reason other than "misconduct in connection with the work." Who will see that reason as anything other than political misconduct? *Physics Today* now has to consider the possibility that both the hearing and the third-party perception of its behavior are previews of future events.

Appendix -- Example: Affirmative action

There are countless examples of power trumping reason in the *Physics Today* workplace, and I will summarize just one here.

Beginning a few years ago, I worked with Jean Kumagai and other *Physics Today* staff members to get the magazine to live up to its claim that it is an affirmative action employer. After many months of seeing our arguments brushed aside, we decided to raise the issue with the *Physics Today* advisory committee, which is an outside group of unpaid advisors. I spoke to the committee on behalf of the concerned staff, and the committee reported our concerns to American Institute of Physics Executive Director and Chief Executive Officer Marc Brodsky, my boss's boss's boss's boss. Brodsky then contacted me and told me that I

had made "a very, very serious charge." He demanded that I bring him the evidence. I did, in a written statement (available) and in an hour-long meeting with him. He said he would investigate the matter.

Five months later, Brodsky summoned me to his office to close the case. His conclusion: *Physics Today's* affirmative action program was doing very well. He explained that he judges the program by its results. But what were the results? At that time, 20 March 1998, *Physics Today* had an all-white staff of editors and writers, with the exception of Kumagai. Since then, she has found other employment, in part because of her frustration over the magazine's affirmative action hypocrisy.

As of this writing, two years after Brodsky proclaimed affirmative action alive and well at *Physics Today*, the magazine has an all-white staff of editors. I'm not talking about a staff of four or five editors, who might all be white by coincidence. I'm talking about an all-white staff of 17 editors. (At least the magazine has hired minority group members as secretaries.) *Physics Today's* editors do not look like the physics community, the journalism community, the Washington, D.C., community where the magazine is based, or the nation as a whole.

Writers Union Protests Firing of Jeff Schmidt

Contact: Jonathan Tasini (212) 254-0279

New York, June 12, 2000 -- The National Writers Union today protested the firing of Jeff Schmidt, a Writers Union member, from his job as a staff editor at Physics Today magazine, a step that was apparently taken in response to the recent publication of a controversial book that Schmidt wrote. "The firing of Schmidt is an affront to the principles of open inquiry and free speech that a magazine of science such as Physics Today is supposed to uphold," said Writers Union President Jonathan Tasini.

On May 31, Schmidt, a member of the Washington, D.C., Local of the Writers Union, was suddenly fired after 19 years on the staff of Physics Today, which is published by the non-profit American Institute of Physics. The dismissal came, Schmidt says, right after his supervisors learned that he had written a book called DISCIPLINED MINDS, which was published last month by Rowman & Littlefield. An article about the book had appeared in the Chronicle of Higher Education and was making the rounds at the offices of Physics Today.

Schmidt admits that his book, whose subtitle is "A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives," was written in a provocative tone. In fact, in the book's opening lines, he declares that the book was "written in part on stolen time," i.e., during free time at the office. Schmidt sees his dismissal from Physics Today "as further proof of the book's thesis: that management's paramount concern is always the political content of the work -- even spare-time work."

"The content of Schmidt's book does not justify the actions of Physics Today management," Tasini stated. "Schmidt has a right to be provocative in his outside writing without suffering the loss of his job."

The National Writers Union, Local 1981 of the United Auto Workers, is a labor union and advocacy organization for freelance journalists, authors, technical writers, poets and other types of writers.

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*Was the theory of relativity written in part on stolen time?
From Writer's Bloc Online, the newsletter of the Washington,
D.C., local of the National Writers Union . . .*

The Schmidt Firing: A Historical Perspective?

By Chris Garlock, editor

For an interesting historical footnote on the question of "stealing time" from work, I recently ran across the following in Carl Sagan's *Broca's Brain*:

"At the Patent Office, Einstein 'soon learned to do his chores more efficiently and this let him snatch precious morsels of time for his own surreptitious calculations, which he guiltily hid in a drawer when footsteps approached.' Such were the circumstances attending the birth of the great Relativity Theory."

"In 1905," Sagan continues, "Einstein published four research papers, the product of his spare time at the Swiss Patent Office." The papers of course, included the famous equation, $E=mc^2$, which, among other things, says that although energy and mass can neither be created nor destroyed, one form of energy or matter can be converted into another form.

Or, to put it another way, work is work.

The Washington Post
24 December 2000
Page B3

A look at...

The Year's Weirdest News

By Chuck Shepherd

Here is my list...of the most disturbing yet underreported stories of the year.

LAWS OF IRONY ARE STRICTLY ENFORCED: Just after publication of his book "Disciplined Minds" in May, Jeff Schmidt was fired after 19 years as a staff writer for Physics Today magazine. In his book, Schmidt argued that a hierarchical organization's structure almost guarantees that its workers cannot devote their full energy to the job; he was terminated after a supervisor learned that in his forward to the book, he playfully wrote that he had completed it partly on "stolen time" -- that is, during office hours. His employers said his dismissal was not related to what he wrote in the book.
-- Chronicle of Higher Education, June 9, 2000

*Disciplined Minds: A Critical Look at Salaried Professionals
and the Soul-Battering System that Shapes their Lives*
(Rowman & Littlefield, 2000) by Jeff Schmidt

ScienceWriters
Summer 2001
(published by the
National Association
of Science Writers)

ScienceWriters reprinted the *Lingua Franca* article
and added this sidebar . . .

***Physics Today* Firing of Jeff Schmidt Draws Protests**

The firing of Jeff Schmidt, who had been an articles editor at *Physics Today* for over 19 years, has prompted a flurry of letters of protest by physicists, science writers, scholars, and educators. MIT linguist and social critic Noam Chomsky helped solicit more than 140 signatures on one letter alone. Another letter, signed by 16 former *Physics Today* staff members, urges AIP Executive Director Marc Brodsky to reverse his decision. Also lending support to Schmidt is the National Writers Union and the University of Maryland, College Park, chapter of the American Association of University Professors.

Citing their concern about the precedent that Schmidt's May 31, 2000, dismissal would set for employees everywhere, lawyers at one of Washington's largest law firms (Dickstein Shapiro Morin & Oshinsky), have waived their fees and are doing what they can to challenge *Physics Today*'s actions, "for the public good." *Physics Today* has retained what Schmidt calls "the most notorious union-busting law firm in the country" (Jackson, Lewis, Schnitzler & Krupman) to deal with any legal challenges in the case. Schmidt's lawyers have given the National Labor Relations Board affidavits from former *Physics Today* science writers who openly did personal writing in their offices but were not punished. But so far the NLRB has failed to see the disparate treatment as illegal. Schmidt is not surprised. He notes that the law generally favors employers, and so he believes that his best chance for justice is support from fellow science writers, physicists, and others.

Dear Jeff Schmidt,

I am grateful that you wrote *Disciplined Minds*. I must admit that I had always held higher education in greater esteem than it deserved, naively believing that “professionals” held themselves to higher standards. I was just brainwashed. Your book was a breath of fresh air, and it was timely: With our culture becoming ever more technologically complex, the last thing we need is for the technical experts and the everyday users of the technology to not think clearly and critically. People need to be taught to be skeptical, to be street-smart in the area of the politics of work, and your book is a good start in that direction.

What I think I observed in your book was the tragedy of the betrayal of the educational system toward those who love — that’s the appropriate word, love — the science and math they discovered. The system seems to be seriously flawed when the awe and wonder that science and math can inspire are shunted aside only for the purpose of performing a job. The killing of that passion is not right. It’s like cutting down a grove of mature fruit trees just for the firewood. Those trees produce not just seasonal fruit year after year, but they provide a welcome reminder of the seasons, food and cover for wildlife, places for children to climb, summer shade, and that intangible that makes us stop and stare — sheer beauty.

To this day I wish I could find a job where I could use the trigonometry and calculus that I worked so hard to master when I took night classes at the local community college over ten years ago. It was a struggle; math doesn’t come easy for me, but I have always enjoyed it, always felt a sense of amazement at its power to solve problems. I took four terms of calculus, earning A’s and very much enjoying the discovery process. I had a dream of being an engineer, but gave that up because of the responsibilities of a job and a marriage and helping to raise three daughters.

One of the insights I gained was that our school system arbitrarily sets us up to learn when we may not be ready. Maybe my experience was unique, but it seems that my brain was more amenable to learning math when I was in my mid-thirties than when I was in my teens. In high school I really struggled, and earned only average grades. As a result I thought of myself as mediocre in math. When I gathered the courage to try again 20 years later, I was just a lot better at it. Certainly I had more discipline, and I wasn’t at the mercy of my glands as much, but it still seems that I was just at a better place in my life to learn. There were times when I would be working on a calculus problem at the kitchen table, and I would ecstatically shout to my wife my thrill at finally understanding a concept, or solving a difficult problem.

As a water plant operator, I taught math classes for a time to other water works employees, and it was a fulfilling experience to see the understanding dawn in the faces of the (mostly) men, who had always been afraid of math. Were there just a lot of poor math teachers, or were they introduced to it at the wrong time of their lives? I don’t want to rag on the school system; I know the teachers are often facing too-large classes, and contending with discipline problems and administrative details that preclude effective teaching. But I just wonder if there isn’t a better way.

Well, time to end this long ramble. I have to get up in the morning to interview for a job at a new, state-of-the-art water treatment plant. I’m highly qualified and I’m feeling hopeful, but I know that despite having adequate credentials and considerable experience, the politics could derail my chances. My general plan is to listen for the fears behind the questions, then offer reassurance. Wish me luck. I will continue to recommend your book to my friends.

Name Withheld

[Note from the same writer to Charles Hayes, publisher of the on-line Self-University Newsletter, which reviewed *Disciplined Minds*]

Dear Mr. Hayes,

A few months ago I changed my ISP and forgot to notify your provider. I was missing the newsletter until I remembered my slip, and I just corrected that. I enjoyed reading the fall 2001 newsletter.

It just so happens that I finally got around to reading Jeff Schmidt's book, *Disciplined Minds*. More than any book in a very long time it had a profound impact on me. It significantly changed — and is changing still — my view of the world of work and of the corporate structures that I encounter.

I am not a “professional.” I worked as a water filtration plant operator at a small utility for 18 years, then quit over a combination of wage dispute and burnout. I returned to school to earn a two-year degree in engineering technology. That whole experience was an education in itself; it was good for me, at age 48, to go back to school where I found that in some ways I was a better student than I was 30 years before. I did well in the technical classes, even winning a scholarship.

I had a lot of anxiety when I quit my job, worrying about losing our house etc. But my wife and I did just fine, and my three daughters, who struggled to work their own way through college, were proud of me.

During school it felt like a sabbatical, and I realized that it was just a very welcome break from the sameness of a no-longer-interesting job. I wish that more workers could get out of their routine for such a restorative break.

My job caused me so much anxiety that I was seeing a psychiatrist. After I quit I visited him one last time. His comment, after staring off into space for a time, was, “I think...that if more people did what you just did...there would be far fewer divorces in this country.” He could be right; I see many people determined to stay in their jobs “for the security” even when their physical and mental health and their important relationships are deteriorating.

After school I found a job with a small engineering firm. It had a very strong corporate mentality, and during the two years I was there I was in a near-constant state of anxiety. I felt that I had conflicting direction depending upon which project engineer I was working for. I had naively concluded that all decisions would be based upon nothing less than sound scientific engineering principles. I was frustrated and confused that decisions at times seemed arbitrary or conflicted with previous direction. I became painfully aware that as “just a technician” I was treated differently than the professional engineers. I saw some of the young engineers become slowly less friendly and more distant and arrogant. The company principals were highly intelligent, but also some of the most manipulative people I had ever met in my life.

After two years and one month I got laid off, along with three others. I was actually relieved. I am receiving unemployment benefits and looking for other work. Since then I read *Disciplined Minds*, and “the light went on” regarding some of the experiences I had had at work. Things just make more sense now, and I realize just how politicized the consulting engineering process is.

I have always been an avid reader, and I fully agree with the Self-University idea that our education is up to us as individuals. I very much enjoy reading the newsletter, and it is a good source of ideas for

continued reading. Keep it up.

Name Withheld

Subj: I absolutely love your book
From: Jonathan R. Armstrong
To: jeff@disciplined-minds.com

Fate herself seemed to cast your book onto my lap. This was one of the best books I've read in the past several years, and I read quite a bit. I'm currently a software developer who's trying to get into medical school; going back to school and taking "post-baccs" has been a degrading and humiliating experience. Not that I was lacking in the humility department, but after a grueling 60-hour work week + move last week I just found out that I flunked my test. I'd just started reading your book at this time and it just makes so much sense to me. I consider this book to be a masterpiece that I hold in the same high regard as Erich Fromm's *Escape from Freedom*.

It is disheartening to realize that there are so many of us who probably get "filtered out" due to our little "detours" into things like wanting to satisfy our intellectual curiosity before we get a chance to make a difference. I do volunteer work at a hospital and am well aware of the "idealistic" versus "buttkissitic" pre-med archetypes you talk about. I'm currently so burned out of my corporate job here, and was contemplating going back to school full time, and have no illusions about the obstacles being presented. Thanks for letting me know what I'm up against. But if you run into a tall eloquent Subway sandwich shop employee next time you're in Denver, you might want to say hello.

Cheers,

Jonathan

[From a subsequent message...]

...What hit home to me the most in your book was how students who take a reductionist, servile approach to the material are the ones most bound to succeed in the current system. I'm certainly not arguing that there isn't technical material that needs to be mastered — I don't think anyone is. But as an undergraduate, a lot of my "problem" was that I had extensive interests in my chosen field of study (sociology) OUTSIDE of the material presented in class. This knowledge proved to be invaluable, but it might have meant that because I stayed up late one night and read some extracurricular material instead of spending yet another hour overlearning the banalities that needed to be regurgitated on the next test, I might've only scored the second or third highest on the final versus being the top student. I was more under the impression at the time that these phenomena were a little less confined to the hard sciences and more in the liberal arts, but now that I'm back in school studying biochemistry it seems as though I'm having the same "problem" again.

Anyway, I'm on "stolen time" right now myself. Hope things work out for you, it means a lot to us young'uns that there are people out there who never did sell out.

Cheers,

Jonathan

Dear Jeff,

I am employed as a professor of physics at the University of Ottawa.

Your book *Disciplined Minds* touched me very deeply — in fact it shook me up and has changed how I teach undergrad classes and how I interact with my graduate students and postdoctoral fellows. One of my graduate students is now reading it, as is one of my colleagues.

It is one of a few books that have had this kind of effect on me. Others are *Representations of the intellectual* by Edward Said and *On power and ideology* by Noam Chomsky. I now define myself as being both an intellectual (in the sense of Said) and a radical professional!

Would it be possible for you to accept an invitation to give a talk on this campus? If so, I would be most happy to organize it and to host your visit.

Sincerely,

Denis G. Rancourt

Department of Physics
University of Ottawa
Ottawa, Ontario
Canada

Windy Cooler
Montgomery, Alabama
7 February 2002

Dear Jeff,

I have just read a review of your book, *Disciplined Minds*, in *Z Magazine*. I felt I had to write to you to commiserate in a sense -- to feel as if I expressed, however unnecessarily, my sincere appreciation for this book and your current unemployment.

I am not a professional. I am a 25-year-old single mother to a six-year-old son. I am yet to graduate from college. I make around \$500 a month. Currently my son and I are being evicted. I am an activist living in Alabama. My latest project is "Reclaiming The Dream" (www.motranco.org). I am the Organizing Coordinator for this.

After this project it is my intention to begin working on a renter's union in Alabama and fight the sales tax on food by joining with others in not paying it, being arrested, and doing it again. Most of my projects come from personal experience.

As some sort of explanation of what it is that I do with my time: I am the recipient of this year's King Spirit Award (don't ask me how, they seemed shocked when they finally met me), the president of the Alabama Green Party, a graduate of the Z Media Institute, a volunteer with Voices in the Wilderness, and a general social justice organizer.

I struggle with poverty and feelings of irresponsibility as I make choices -- as I am driven to choices, it seems, that I know the immediate consequences of. I'm scared a lot. I can't find employment that allows me the things that I value most.

I am told often how I could do so much more with my bright little life. "More" meaning: making a good living.

I have made a conscious choice to never join the professional class. My partner, John, has a graduate degree in public policy from Harvard University. He struggles often with his own choice to avoid professionalism -- which for him, unlike for me, was his destiny -- at the time he left Massachusetts three years ago.

Our choice was made for different reasons. For me I came out of a pregnancy of starvation and rejection, anger and then determination, and a disdain for the system that creates the inhumanity that I experienced. I perceived the broken, servile, insecurely egoistical, blind, and materialistic culture I felt surrounded me as being strongly connected to people who classed themselves as professional. Since then, as an adult, I have maintained this rejection, but for less hysterical reasons.

For John it came after graduate school when he realized that his work, in experience after experience, left him vulnerable, dependent, and disconnected. He had a long depression.

Today, as I struggle with my own feelings of inadequacy and the reality of my poverty and motherhood, I struggle as I work with people who are professional activists, people who make more than enough to feed themselves and have regular shelter, who have access to fax machines and phones, who go to parties, who have graduate degrees, security -- and who are highly critical of my world view -- even as they marvel at their work with me. I hear from them, when they are afraid of some uncomfortable consequence or another, that they know more of what they are doing because they are professional, educated, reasonable, careful, and pragmatic. I fail to see the positive results of this pragmatism (outside of their own continued sustenance) and yet, they persist in this conversation with me, time after time. It is a message that aches deeply inside me even as I reject it. It is powerful -- like runway models that appear like little boys and I reject even as I sink with feelings of physical malformation.

I worry at how long I can maintain my integrity and provide for my son while we live in a world where we are not valued -- even by those who are quick to point out their own good will and dedication to justice.

I wonder often how right I am. I can't seem to submit.

So, while I doubt that by now discovering this book these things will dissipate in your genius, I do thank you for at least making the effort in a way that might be coherent to those still clinging reluctantly to the protection and abuse of professionalism.

Dear Dr. Schmidt,

I found your book most interesting. One thing that struck me about your description of graduate studies in physics is that some of it is equally applicable to undergraduate engineering. Problems are presented as puzzles that obscure the underlying physical processes. You've got to memorize a lot of tricks since you can bet that an understanding of the fundamentals won't let you solve enough examination questions to pass.

Straight after high school I enrolled in an engineering program. In the course entitled statics, which involved analysis of pin-jointed trusses, I was amazed that some of the people who were getting A's and B's didn't understand the basic application of Newton's laws that made the analysis possible. I failed that course. I couldn't memorize the tricks. I found that in physics things were a little different and that the same people were asking me how to do the weekly assignments.

The next year I switched my major to physics. I had actually done quite well in the electrical side of engineering. Entering physics I figured I'd be light years ahead, understanding phasors, and so forth, and set to the electrical problems with gusto. I got a rude shock. I had to stop and study the textbook carefully because I suddenly realised that I didn't really understand what a phasor represented, and that the techniques that had worked for me in engineering weren't going to get me by in Physics. (Physics *graduate* work, at least in the U.S., is different. As you have graphically portrayed in your book. Much more like engineering. A boot camp).

I suspect the horrendous workloads imposed on engineering undergrads (worse, by most estimations, than that imposed on their physics compatriots) are there for just one purpose. Graduating engineers have proven, if nothing else, that they are willing, without question, to be ground into dust.

I don't know what the status of engineering is in the U.S., but in Canada and Australia, the two countries I am familiar with, the professional engineering bodies are very powerful. Membership confers the privilege of holding certain jobs. Employers do not hire engineers who are not members. People who hold titles such as "technician" get fed up with the low wages, go and get an engineering degree, come back to do almost exactly the same type of work, with the title of "engineer" and twice the salary. An older friend of mine who had been doing his job for twenty years, was told by the engineering body that he could no longer hold his job since his title was "Supervising Engineer." He had no degree, could not gain entrance to their organization, and was therefore not a real engineer. His employer ruminated about this, then changed his title to "Engineering Supervisor." The issue never came up again. His job stayed the same.

I'd like to point out that at most Canadian graduate schools in physics that the horrendous qualifying exam does not exist. I did graduate work in Canada and had to study second and third year undergrad texts for an oral exam. I actually memorized some derivations, but it wasn't particularly arduous. I was ready after a couple of months of part time study. If you clam up in the exam (like I did) they generally ask you simpler questions that let you demonstrate an understanding of basic concepts. I squeaked by. I learned later through clandestine sources that the committee's assessment of me was that my theoretical knowledge was "adequate but not impressive," but that I had the ability and willingness to become a physicist. I was a bit lucky I suppose. Other people's committees were somewhat less forgiving, but few were draconian.

I think that the Canadian system might offer a good middle ground between the American boot camp system and the British one which is now, frankly, inadequate.

This really is the Dilbert era. I work mainly in the high-tech sector. Everyone I've met in the business

who first came across that comic strip has said, "The author must work for our company. He's got our corporate culture down pat." Of course it's an industry-wide phenomenon: mind-bogglingly stupid managers, insane policies. Perhaps it's because the high-tech sector is still in its formative stages; its employees are not used to the professional structure of, say, doctors and lawyers, and this is what gives the Dilbert strip its edge. A strip about health care or the legal system might be just as valid, but I doubt doctors and lawyers would identify with it so much, having long since accepted and internalized the values of their profession....

Best of luck,

Peter Hargraves

you got fired for writing that book? wow, that sucks.

i read it in the hot tub a couple mnths ago — i had picked it up while browsing thru the “business self help” section which i found comical — i was reading and laughing at these business management type books — they amuse me

then i saw this 1 book nestled in the batch that was actually critical of the genre — it was funny

so I picked it up and read it in the hot tub that nite

the management types who fired you shld try to argue with the ideas expressed in the book rather than fire you for expressing same

because by their firing, they’re actually lending evidence to the very analysis of the workplace that you had offered in the book

they’re showing that the corporate workplace functions pretty much according to the “model” you had proposed

the north american workforce with its self help book genre and its hr and pr industries is really silly — they seem to be the most incredibly thoughtless, indoctrinated people ever to appear on earth

i hope they’re a mutation that simply goes away

Matt L.

Dear Mr. Schmidt:

I am a second-year physics graduate student at the University of California, Irvine. I could not believe how relevant your book was to my situation here. Spending all this time dissatisfied with the department and the academic situation as a whole and searching for the words and the way to think about it, *Disciplined Minds* took the words right out of my mouth.

I have struggled over the past year to raise political social awareness in my department and the sciences, to question the norm and the decisions of the authority, to seek the consequences of our work in school and how things could change for the better, but all with very limited success. Your book has become an inspiration and a guidebook for graduate career. I just wanted to thank you very much....

Sincerely,

Michael Twardos

To: jeff@disciplined-minds.com

I've just finished reading your book. I couldn't agree more with you. I am an EE grad student. Your book reflects exactly the same environment here.

best regards,

Name Withheld

[The writer is a foreign student pursuing a PhD in electrical engineering at a major American university.]

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Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives
(Rowman & Littlefield, 2000) by Jeff Schmidt

Introduction

This book is stolen. Written in part on stolen time, that is. I felt I had no choice but to do it that way. Like millions of others who work for a living, I was giving most of my prime time to my employer. My job simply didn't leave me enough energy for a major project of my own, and no one was about to hire me to pursue my own vision, especially given my irreverent attitude toward employers. I was working in New York City as an editor at a glossy science magazine, but my job, like most professional jobs, was not intellectually challenging and allowed only the most constrained creativity. I knew that if I were not contending with real intellectual challenges and exercising real creativity—and if I were not doing anything to shape the world according to my own ideals—life would be unsatisfying, not to mention stressful and unexciting. The thought of just accepting my situation seemed insane. So I began spending some office time on my own work, dumped my TV to reappropriate some of my time at home, and wrote this book. Not coincidentally, it is about professionals, their role in society, and the hidden battle over personal identity that rages in professional education and employment.

The predicament I was in will sound painfully familiar to many professionals. Indeed, generally speaking, professionals today are not happy campers. After years of worshiping work, many seemingly successful professionals are disheartened and burned out, not because of their 70-hour workweeks, but because their salaries are all they have to show for their life-consuming efforts. They long for psychic rewards, but their employers' emphasis on control and the bottom line is giving them only increased workloads, closer scrutiny by management and unprecedented anxiety about job security. In this way the cold reality of employer priorities has led to personal crises for many of this country's 20 million professionals.

Burned-out professionals may not be immediately obvious to the casual observer, because typically they stay on the job and maintain their usual high level of output. But they feel like they are just going through the motions. They have less genuine curiosity about their work, feel less motivated to do it and get less pleasure from it. The emotional numbness inevitably spreads from their work lives into their personal lives.

According to Herbert J. Freudenberger, the New York psychologist who coined the term burnout in the mid-1970s, the personal consequences are wide-ranging and profound: cynicism, disconnection, loss of vitality and authenticity, decreased enjoyment of family life, anger, strained relationship with spouse or partner, divorce, obsessive behavior such as "workaholism," chronic fatigue, poor eating habits, neglect of friends, social isolation, loneliness—and the list of symptoms goes on. Freudenberger tells me he has seen a big increase in career burnout among professionals in the past twenty years. Ironically, such depression is most likely to hit the most devoted professionals—those who have been the most deeply involved in their work. You can't burn out if you've never been on fire.

The problem shows no sign of easing. In fact, the ranks of troubled professionals are swelling as members of Generation X finish school and rack up a few years in the workforce. Many Xers, having observed the unfulfilling work ethic of their baby boom predecessors, want their own working lives to be fun and meaningful from the get-go. Starting out with priorities that took boomers a decade to figure out, but in no better position to act on those priorities, Xers are simply having career crises at an earlier age. Clearly, there is an urgent need to understand why career work so often fails to fulfill its promise.

I argue that the hidden root of much career dissatisfaction is the professional's lack of control over the "political" component of his or her creative work. Explaining this component is a major focus of this book. Today's disillusioned professionals entered their fields expecting to do work that would "make a difference" in the world and add meaning to their lives. In this book I show that, in fact, professional education and

employment push people to accept a role in which they do not make a significant difference, a politically subordinate role. I describe how the intellectual boot camp known as graduate or professional school, with its cold-blooded expulsions and creeping indoctrination, systematically grinds down the student's spirit and ultimately produces obedient thinkers—highly educated employees who do their assigned work without questioning its goals. I call upon students and professionals to engage in just such questioning, not only for their own happiness, but for society's sake as well.

This book shows that professional education is a battle for the very identity of the individual, as is professional employment. It shows how students and working professionals face intense pressure to compromise their ideals and sideline their commitment to work for a better world. And it explores what individuals can do to resist this pressure, hold on to their values and pursue their social visions. People usually don't think of school and work in terms of such a high-stakes struggle. But if they did, they would be able to explain why so many professional training programs seem more abusive than enlightening, and why so many jobs seem more frustrating than fulfilling.

I decided to write this book when I was in graduate school myself, getting a PhD in physics, and was upset to see many of the best people dropping out or being kicked out. Simply put, those students most concerned about others were the most likely to disappear, whereas their self-centered, narrowly focused peers were set for success. The most friendly, sympathetic and loyal individuals, those who stubbornly continued to value human contact, were handicapped in the competition. They were at a disadvantage not only because their attention was divided, but also because their beliefs about big-picture issues such as justice and social impact caused them to stop, think and question. Their hesitation and contemplation slowed them down, tempered their enthusiasm and drew attention to their deviant priorities, putting them at a disadvantage relative to their unquestioning, gung-ho classmates. Employers, too, I realized, favored people who kept

their concerns about the big picture nicely under control, always in a position of secondary importance relative to the assigned work at hand. Thus I saw education and employment as a self-consistent, but deeply flawed, system. I wrote this book in the hope of exposing the problem more completely and thereby forcing change.

A system that turns potentially independent thinkers into politically subordinate clones is as bad for society as it is for the stunted individuals. It bolsters the power of the corporations and other hierarchical organizations, undermining democracy. As I will explain in detail, it does this by producing people who are useful to hierarchies, and only to hierarchies: uncritical employees ready and able to extend the reach of their employers' will. At the same time, a system in which individuals do not make a significant difference at their point of deepest involvement in society—that is, at work—undermines efforts to build a culture of real democracy. And in a subordinating system, organizations are more likely to shortchange or even abuse clients, because employees who know their place are not effective at challenging their employers' policies, even when those policies adversely affect the quality of their own work on behalf of clients.

This book is intended for a broad range of professionals, nonprofessionals and students, and for anyone interested in how today's society works. It is for students who wonder why graduate or professional school is so abusive. It is for nonprofessionals who wonder why the professionals at work are so often insufferable, and who want to be treated with greater respect. It is for socially concerned professionals who wonder why their liberal colleagues behave so damn conservatively in the workplace. (Chapter 1 explains how professionals are fundamentally conservative even though liberalism is the dominant ideology in the professions.) It is for individuals who are frustrated by the restrictions on their work and troubled by the resulting role they play—or don't play—in the world. It is also for those who simply find their careers much less fulfilling than they had expected and aren't exactly sure why.

Disillusioned lawyers, doctors, financial analysts,

journalists, teachers, social workers, scientists, engineers and other highly educated employees are looking for a deeper understanding of why their lives are stressful and feel incomplete. My hope is that readers will find such an understanding in these pages, along with effective strategies for corrective action. If you are a professional, coming to understand the political nature of what you do, as part of an honest reassessment of what it really means to be a professional, can be liberating. It can help you recover your long-forgotten social goals and begin to pursue them immediately, giving your life greater meaning and eliminating a major source of stress. It can help you become a savvy player in the workplace and reclaim some lost autonomy. And, ironically, it can help you command greater respect from management and receive greater recognition and reward, without necessarily working harder.

If you are a student, understanding the political nature of professional work can help you hold on to your values and moral integrity as you navigate the minefields of professional training and, later, employment. For students trying to get through professional training intact, this book can serve as something of a survival guide, explaining the frightening experiences and warning of what lies in store.

If you are a nonprofessional, you experience even more lack of control, unfulfilling work, insecurity and other sources of stress than do professionals. As a consequence, the toll on your physical and psychological well-being is even greater than that suffered by professionals. If you want to act individually or collectively to improve your situation, then it pays to know what makes your professional coworkers tick. Such awareness can help you figure out which people you can trust and how far you can trust them. When professional and nonprofessional employees maintain solidarity in the workplace, they can cover for each other and get more concessions from their employer. But any alliance between unequal partners is doubly risky for the less powerful party—in this case the nonprofessionals, who are at the bottom of the

workplace hierarchy. By understanding professionals, you reduce the chances of being double-crossed by them. You'll be treated with more respect, too.

Whatever your occupation, you have to deal with a variety of professionals when you are off the job. Most of these professionals work for others, not directly for you. Whether you visit an HMO, send kids to school, request a government service, see a counselor, get assistance from a social worker, deal with a lawyer, file a consumer complaint or contact a local TV station or newspaper, understanding the political nature of professional work will help you get better service. If you are involved in an independent organization working for social change, you have to contend not only with professionals in the corporations or agencies that your group confronts, but also with professionals advising your own organization. Groups that simply trust professionals without truly understanding them are very likely to be misdirected or sold out by those professionals.

And, of course, everyone deals with professionals indirectly, too. For instance, newspapers, magazines, radio and television are filled with supposedly objective news reports, analyses and studies prepared by professionals. What should you believe? To truly understand the output of these or other professionals, you first need to understand the political nature of the professional's role at work.

The political nature of professional work is this book's unifying theme. To make the case that the professional's work is inherently political, I examine not only professionals and what they do (part one: chapters 1 to 6), but also the system that prepares them to do it (part two: chapters 7 to 13) and the battle that one must fight to be politically independent (part three: chapters 14 to 16).

My hope is that whether you are a professional, a nonprofessional or a student, you will find here an unsettling but empowering new way of looking at yourself, your colleagues, the institution that employs or trains you, and society as a whole. This book strives to

arm you with a very practical analytical tool that you can use to your advantage in whatever individual and collective struggles you find yourself in as an employee, student, organization member, consumer or citizen.

A note on pronouns. To avoid overuse of phrases such as "he or she," I will use female pronouns in part one and male pronouns in part two (the problem doesn't arise in part three). Today most professionals are women, and the female majority, which stood at 53% in 1997, is growing. Women have long made up large majorities in professions with relatively low social status and salary; thus teachers, social workers, registered nurses and librarians have been said to labor in the subprofessions. But today the proportion of women is increasing throughout the professions. Nearly half the students now in medical school and law school, for example, are women, up from about 9% in 1970.

A note on references. Many of the references listed at the end of each chapter make for fascinating reading. I encourage you to look further into topics in this book that interest you, and so I have given lots of references and have spelled things out to make them as easy as possible to look up. Time spent with these materials will surely be thought provoking, informative and entertaining.

THE SHOP TALK OF AMATEURS & PROFESSIONALS

by Jeff Schmidt

Nothing reveals more clearly the degree to which employed professionals are alienated from their subjects than does the sharply contrasting behavior of the hobbyists or "buffs" in their fields. When hobbyists encounter one another at a social gathering, before long you will find them talking eagerly about the content of their subject of common interest, showing an excitement, enthusiasm, wonder and curiosity that is reminiscent of beginning professional students. This rarely happens when professionals talk casually with their colleagues. Unlike the amateurs, the professionals don't talk much about the work itself; they often appear detached from their subject, as if they don't derive much satisfaction from it. Yes, they "talk shop," but their focus is so far from the content of the work itself that you would have a hard time if you had to guess what kind of "shop" they work in. A commercial bank? A junior high school? A government agency? A university department? Casual conversation among professionals tends to focus on the actions and personalities of employers and powerful figures within their fields -- the standard gossip topics of the powerless. Their gossip is by no means idle, however, for the politics are central to their work as professionals.

Thus, at the wine-and-cheese reception after an English department colloquium, a first-year graduate student musters the courage to approach the speaker, a well-known professor from another university, and ask a question about literature. But before the conversation has gotten very far, a local faculty member walks up and derails it with the question that *he* has been waiting to ask: "Is Jones really planning to leave Yale? I heard a rumor." Soon the two professors are engrossed in a wide-ranging discussion about job openings around the country, research grants, book contracts, journal editors and who's jockeying for power in the field. The graduate student, realizing that the conversation is not going to return to the evidently less important topic of literature, retreats back into the crowd. Versions of this generic scene occur frequently in every field.

The professors here symbolize the tragedy of all employed professionals who started out as students loving their subjects. Such students submit themselves to the process of professional training in an effort to be free of the marketplace, but instead of being strengthened by the process they are crippled by it. Deprived of political control over their own work, they become alienated from their subjects and measure their lives by success in the marketplace.

Source: Schmidt, Jeff. *Disciplined Minds : A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives*. Lanham, MD: Rowman & Littlefield, 2000. From Chapter 8: pp. 145-146.

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IDEOLOGY AND PROFESSIONALS

by Jeff Schmidt

For understanding the professional, the concept of "ideology" will emerge as much more useful than that of "skill." But what is ideology, exactly? Ideology is thought that justifies action, including routine day-to-day activity. It is your ideology that determines your gut reaction to something done, say, by the president (you feel it is right or wrong), by protesters (you feel it is justified or unjustified), by your boss (you feel it is fair or unfair), by a coworker (you feel it is reasonable or unreasonable) and so on. More importantly, your ideology justifies your own actions to yourself. Economics may bring you back to your employer day after day, but it is ideology that makes that activity feel like a reasonable or unreasonable way to spend your life.

Work in general is becoming more and more ideological, and so is the workforce that does it. As technology has made production easier, employment has shifted from factories to offices, where work revolves around inherently ideological activities, such as design, analysis, writing, accounting, marketing and other creative tasks. Of course, ideology has been a workplace issue all along: Employers have always scrutinized the attitudes and values of the people they hire, to protect themselves from unionists, radicals and others whose "bad attitude" would undermine workplace discipline. Today, however, for a relatively small but rapidly growing fraction of jobs, employers will carefully assess your attitude for an additional reason: *its crucial role in the work itself*. On these jobs, which are in every field, from journalism and architecture to education and commercial art, your view of the world threatens to affect not only the quantity and quality of what you produce, but also the very nature of the product. These jobs require strict adherence to an assigned point of view, and so a prerequisite for employment is the willingness and ability to exercise what I call ideological discipline.

This book is about the people who get these jobs and become members of the ideological workforce -- that is, professionals. My thesis is that the criteria by which individuals are deemed qualified or unqualified to become professionals involve not just technical knowledge as is generally assumed, but also attitude -- in particular, attitude toward working within an assigned political and ideological framework. I contend, for example, that all tests of technical knowledge, such as the Graduate Record Examinations (GRE) or the Law School Admission Test (LSAT), are at the same time tests of attitude and that the examinations used to assess professional qualification are no exception. I consider in detail how the neutral-looking technical questions on such examinations probe the candidate's attitude. The qualifying attitude, I find, is an uncritical, subordinate one, which allows professionals to take their ideological lead from their employers and appropriately fine-tune the outlook that they bring to their work. The resulting professional is an obedient thinker, an intellectual property whom employers can trust to experiment, theorize, innovate and create safely within the confines of an assigned ideology. The political and intellectual timidity of today's most highly educated employees is no accident.

Source: Schmidt, Jeff. *Disciplined Minds : A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives*. (Lanham, MD: Rowman & Littlefield, 2000), Chapter 1, pages 15-16.

If you take the couple of hours of frustration that you experienced meeting with them and multiply it by a large number, then you will get some idea of how much frustration the unimaginative thinkers themselves are experiencing -- because they live with such thinking 24/7.

Jeff Schmidt to Ralph Dumain, 13 August 2001

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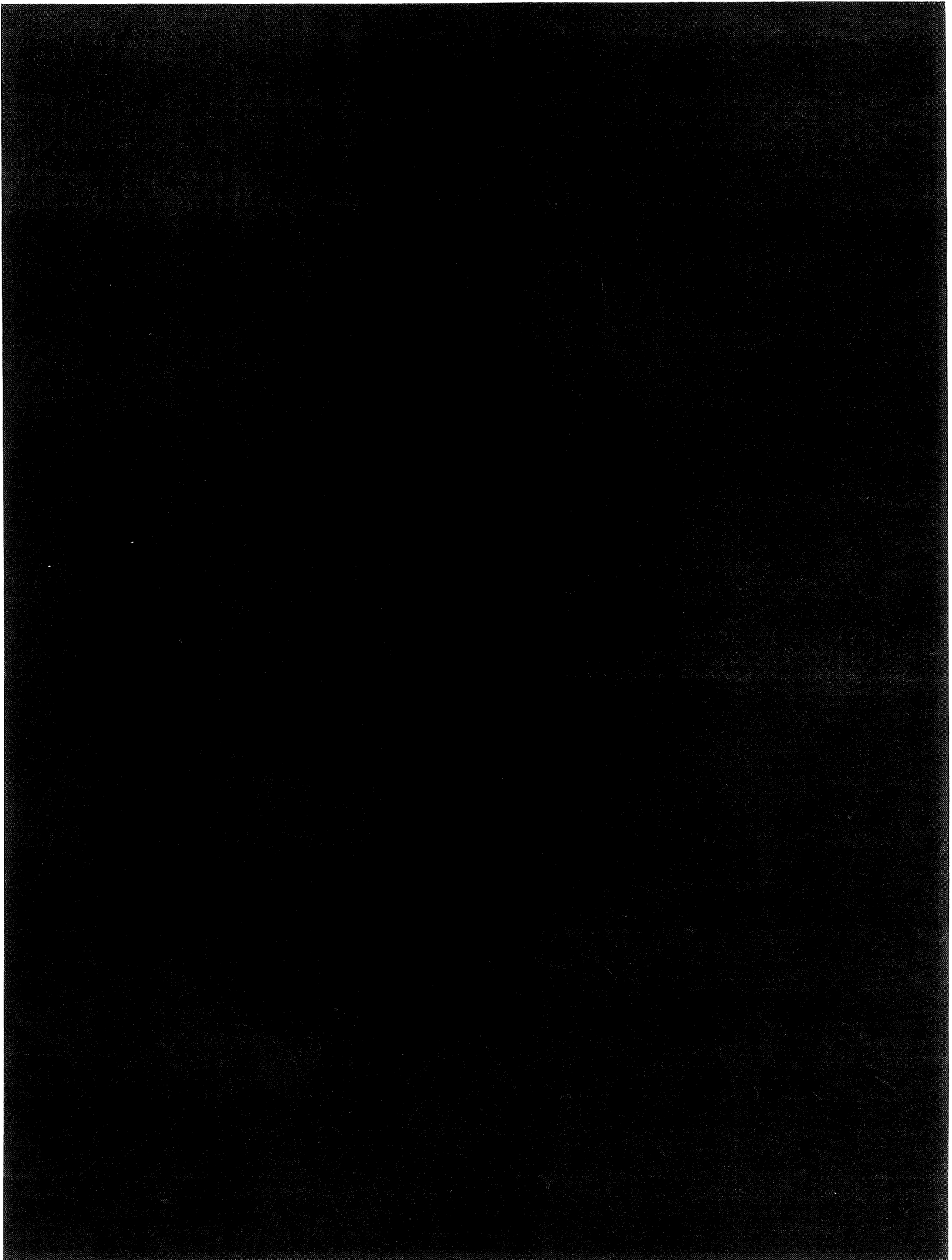
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Last year, Dr. Jeff Schmidt, a staff writer at Physics Today, published a book that looks critically at education and employment in physics and other fields, focusing specifically on the treatment of graduate students, postdocs and untenured junior faculty. *Disciplined Minds* (Rowman and Littlefield, 2000) is startling in its description of the destruction of creativity within the academic workplace. The book has received much attention in the months since publication, but the reaction of Schmidt's employer was not positive. Shortly after publication of the book, Schmidt was fired from his 19-year job at Physics Today. Managers cited the book's provocative opening lines, in which Schmidt dramatized the way he worked on his book about work: "This book is stolen. Written in part on stolen time, that is. I felt I had no choice but to do it that way. Like millions of others who work for a living, I was giving most of my prime time to my employer.... My job, like most professional jobs, was not intellectually challenging and allowed only the most constrained creativity.... The thought of just accepting my situation seemed insane. So I began spending some office time on my own work, dumped my TV to reappropriate some of my time at home, and wrote this book."

To date, 750 writers and scientists, including 500 APS members, have written to Physics Today protesting Jeff Schmidt's dismissal. Some of their comments, as well as additional information about *Disciplined Minds*, can be read online at <http://disciplined-minds.com>.

The editor of The Biological Physicist talks with Jeff Schmidt about his controversial work.

Sonya Bahar: If you were to describe the book briefly to someone who had not yet read it, what would you say?

Jeff Schmidt: It's about the politics of work and the battle one must fight to be an independent thinker. It focuses on the predicament of scientists and other salaried professionals.

The book shows that the paramount concern of supervisors is the political aspects of the work, over which they want exclusive control. Professional work involves decision-making in which someone's point of view, power or wealth is at stake, and so the work is an inherently political activity. Once you admit that, you can explain why there is so much job dissatisfaction and burnout. The disillusionment comes when employers succeed in dictating

the political orientation of the work -- dictating who you are in your work and therefore who you are in society, because your work is your biggest project, your biggest interaction with society.

Recognizing the political nature of work also allows you to understand why professional training is so abusive. I'm talking about graduate school, which is a repressive intellectual bootcamp because it attempts to break individuals in to playing a politically subordinate role, to ready them for employment.

So the workplace is a battleground for your very identity, as is graduate school. The issue is: Are you going to pursue your own vision and stand for something, or are you going to be politically subordinate? The book shows how to do the former.

SB: Describe the genesis of the book -- what led you to write it?

JS: At the University of California, Irvine, it seemed like the best of my fellow physics graduate students were dropping out or being kicked out. The system seemed to favor self-centered, narrowly focused students. The others were at a disadvantage not only because their attention was divided, but also because their concerns about big-picture issues such as justice and the social role of the field caused them to stop, think and question. Their hesitation and contemplation slowed them down, tempered their enthusiasm and drew attention to their deviant priorities. That put them at a disadvantage relative to their unquestioning, gung-ho classmates.

There's about a 50 percent dropout or kickout rate for students entering PhD programs in all fields. I found that this weeding-out is not politically neutral. To put it bluntly, the programs favor ass-kissers -- students with a politically subordinate attitude -- those who will be the best servants of the status quo.

I realized that employers, too, favored people who kept their concerns about the big picture nicely under control, always in a position of secondary importance relative to the assigned work at hand. So I saw education and employment as a self-consistent, but deeply flawed, system. I wrote *Disciplined Minds* to expose the problem more completely and thereby force change.

SB: How would you describe the reaction to the book -- from reviewers, students, faculty?

JS: Happily, they are taking the book seriously. Reviewers appear to understand the book's key concepts, such as ideological discipline and assignable curiosity. The reviews have all been positive, but that's less significant than the simple fact that the book is getting reviewed.

I've received some very enthusiastic letters from graduate students, thanking me for writing the book, and saying, "Thank you for validating my experience and letting me know I'm not crazy."

A few faculty in physics departments and STS (science, technology and society) programs are using the book in their courses on ethics and the social responsibility of scientists. And some education, sociology and even business faculty are using the book in their classes.

It's funny that the big chain bookstores have put the book on their "Business Life" shelves, sandwiched between dress-for-success, how-to-conform type books with the opposite point of view. The first time I saw that, I jumped back, fearing some sort of matter/antimatter annihilation.

SB: *What did you anticipate Physics Today's reaction would be to starting your introduction with the statement, "This book is stolen"?*

JS: Because the introduction doesn't name *Physics Today* or any other employer, I thought they would read it the same way everyone else would read it -- as an announcement of an attitude, a point of view about life in hierarchical organizations. And I'm sure they did read it that way. But they didn't like the attitude, which they called "inflammatory." And they were looking for an excuse to get rid of a workplace activist. It didn't matter that my supervisors and members of the physics community praised my work for the magazine and that I was two months ahead of schedule in meeting the annual work quota that the magazine set for me.

As I mentioned, *Disciplined Minds* argues that management's paramount concern is the political content of the work. What I learned by writing the book is that they also judge your spare-time work by its political content.

SB: *You talk about "the political aspects of the work." Could you define political in this context?*

JS: Political means affecting the distribution of power in society. The product of professional labor, for example, is political. It takes sides. The journalist's angle on a story, the accountant's bookkeeping decision, the lawyer's choice of contract language, the historian's depiction of events, the minister's sermon, the teacher's lesson, the welfare worker's determination, even the speech writer's joke -- professional work tilts one way or the other, and the way it tilts is never an accident. The work of salaried professionals is politically sensitive, because it involves decision-making in which their employers' interests are at stake.

A scientist's research, for example, can go in any of a vast number of scientifically interesting directions at

every juncture. Which of these directions does the scientist deem the most interesting? Is it a direction that holds promise for the company business or for attracting the interest of a funding agency? Or is it some other direction? *Disciplined Minds* quotes the boss of a major corporate research facility that employs more than 500 PhD scientists and engineers: "You can't select problems for true scientists, much less tell them how to attack the problems. But you can make sure that they are fully informed of the needs of the company businesses that pay the bill." The scientific professionals are also fully aware that the company periodically scrutinizes the product of their labor, to decide which scientists to keep and which ones to dump.

SB: *In your chapter "Now or Never," you advocate resistance to what you describe as a "soul-battering system" -- a personal resistance with a strong political dimension. Do you have any suggestions for institutional reform?*

JS: I suggest workplace democracy at the lowest level, with each workplace innovating its own mechanisms of democracy. Workers who believe that democratic decision-making is inefficient would be free to elect someone to boss them. However, they'd have the power to unelect the boss at any time. The staff meeting would always be the highest authority in the workplace.

At *Physics Today*, I asked my colleagues, "Who is going to make the best decision when an important question arises -- the staff, with two centuries of collective experience in science journalism, or the appointed boss, with his five years of experience?" They looked over their shoulders and said I had a good point. In my case, for example, the staff was proud to have a coworker who had written a book, and certainly wouldn't have fired me for it. But it wasn't a democratic workplace.

SB: *What do you think of the tenure system?*

JS: It would be elitist to say that faculty are the only people within the physics community who should have academic freedom. I think everyone should have the protection of tenure. I certainly could have used it.

Graduate school is an intensive and protracted period of scrutiny during which the individual is pressured to conform under threat of expulsion. The tenuring process is another years-long process of scrutiny. Those who remain after the two long rounds of weeding and transformation are so intellectually and politically timid that they don't need tenure. Thus the people who need the protection of tenure don't have it, and those who have it don't need it, because they have nothing provocative to say.

SB: *But don't some people survive that process with their values intact? I personally know a number of tenured faculty who retain both great creativity and integrity.*

JS: Of course. In fact, the book has a chapter titled, "How to Survive Professional Training with Your Values Intact." Resistance is difficult, but it is possible -- and necessary. It need not be as rare as it is. Certainly, resisting the system carries some risk, but not resisting is a far deadlier course for your individual identity.

SB: *How would you compare the treatment of graduate students and postdocs to the treatment of untenured junior faculty?*

JS: In all three cases, supervisors can demand cult-like dedication, because more than money is at stake. The employees labor under the threat of having their career tickets canceled.

Junior faculty often have fewer illusions about what's going on. They may be able to figure out who's going to vote for them and who's going to vote against them at the tenure-decision meeting. There's less pretense that there is no politics involved. Graduate students are generally less aware that their attitudes and values are being scrutinized, less aware that the attitudinal assessment plays a role in deciding if they will be deemed to have passed the PhD qualification examination.

SB: *Would you have any advice for a faculty member who truly believes that a student is not qualified, on scientific grounds, to pursue a doctoral dissertation?*

JS: Such students are usually not very thrilled with the work and leave on their own. Those who are excited about the subject matter and motivated to stay should be offered a program of remedial instruction and the time to do it -- just as junior faculty are sometimes granted extra time before the tenure decision.

SB: *Is the ACLU involved in your case?*

JS: The Bill of Rights doesn't protect employees in private workplaces, and so the ACLU tends to stay away from employment cases. However, they find *Physics Today's* actions particularly troubling, and so they are thinking about the case. But legal action is not likely to do anything. I'll get justice only if enough members of the science community announce that they are concerned about it.

SB: *You specifically focus on the physics community in your book. Do you see any major differences between physics and, say, the biological sciences, in this regard?*

JS: No. There are plenty of differences, but they aren't major. It's the similarities that are major -- similarities between all the professions, from art to law to zoology. The politics of professional training are the same, and the politics of the work itself are the same. If you let me delete one percent of the words from a transcript of people "talking shop" at a cocktail party, I can make it impossible for you to figure out what field they are in. People who go into physics hoping to escape politics are disillusioned

when they find that the field is no less political than any other field. Social scientists have focused so much on the differences between the professions that they have missed the important, fundamental similarities. (If it takes a physicist to identify those, then we have a paradox!)

But it's always fun to ignore the big picture so that the differences look big. If we do that, then the cultural difference between biologists and physicists in science is like the difference between pediatricians and surgeons in medicine, or the difference between bomber pilots and fighter pilots in the Air Force. The subculture of biology is less arrogant, more open to questions, more respectful of differences, more attractive to women. There are also differences within subfields of physics itself. In the book, a physics graduate student describes the almost laughable arrogance of the high-energy-physics group at his university. There are lots of exceptions to these generalizations, and so they are more entertaining than useful.

SB: *You talk of democratically controlled workplaces, but how do you propose to deal with the hierarchy inherent in educational systems? Given that there is some "canon" of science that does need to be learned -- how to solve the Schrödinger equation, how to run a DNA sequencing gel -- what do you propose as an alternative to a hierarchical educational system?*

JS: Thirteen-year-olds teach their teachers about computers, proving in the process that there is no social hierarchy inherent in education. However, to people who assume naively that there are separate systems of education and employment, education appears to be inherently hierarchical. Our society features a single, thoroughly integrated system of education and employment. The education component is hierarchical and competitive because it is a sorting machine for employers, a gate-keeper for the corporations and academic institutions.

Learning doesn't require credentialing, ranking, grading, high-stakes testing, groveling for letters of recommendation and so on. Good teachers don't need -- or want -- the power to crush their students socially.

The Biological Physicist welcomes comments about this article. Do you think Schmidt's criticisms of academia are valid? Do you think they go too far? How do his comments relate to your own experiences as professional scientists? Email your thoughts to bahar@neurodyn.umsi.edu, for possible publication in a special "Letters" section of the December 2001 issue of The Biological Physicist.

Conference postponed!!

The First SIAM Conference on Life Sciences, originally scheduled for September 24-26, 2001, at the Boston Park

Plaza Hotel, Boston MA, was postponed due to the tragedy of September 11th. The meeting has been rescheduled for March 6-8, 2002, at the same location. For more details, visit the conference website: <http://www.siam.org/meetings/lso1/>.

The abstract deadline for the 2002 March Meeting is approaching! The deadline for receipt of abstracts is 5:00pm EST December 7, 2001. Complete abstract submission rules and instructions can be found at: <http://www.aps.org/meet/abstracts/meet-abstract.html>. DBP Symposia are still being selected, but the Program Chair, Bob Austin, has provided a list of DBP Focus Sessions, invited speakers, and tentative talk titles. There are a number of slots for contributed talks in each Focus Session. For any questions, please check the APS website or contact Bob Austin at austin@princeton.edu.

10.9.1 Actin Cytoskeleton and Cell Locomotion, organized by **Jonathan Katz**. Invited speakers: **Julie Theriot**, "Force Generation by Actin Polymerization: Collective Phenomena"; **Alex Mogilner**, "Entropic Depolymerization – Contraction of the Cytoskeletal Gels and its Role in Locomotion". **Anders Carlsson**, Chair.

10.9.2 Dynamics of Cardiac Fibrillation, organized by **Harold M. Hastings**. Invited speakers: **Richard A. Gray**, "Ventricular Fibrillation and Restitution in Small and Large Mammalian Hearts: Experimental Results"; **Flavio H. Fenton**, "Ventricular Fibrillation and Restitution in Small and Large Mammalian Hearts: Simulation Results". **Harold M. Hastings**, Chair.

10.9.3 Dynamical Modeling: Molecular through Behavioral Studies, organized by **Peter A. Tass**. Invited speaker: **Thomas Fieseler**, "Synchronization

Tomography: Modeling and Exploring Complex Brain Dynamics". **Frank Moss**, Chair.

10.9.4 Structure and Dynamics of Biomolecular Materials, organized by **J. Kent Blasie**. Invited speakers: **Cyrus Safinya**, "Synchrotron X-ray Scattering studies of DNA/Lipid Complexes"; **Greg Smith**, "Neutron Scattering Studies of Biomimetic Ultrathin Films". **J. Kent Blasie**, Chair.

10.9.5 Structural and Functional Properties of Protein Folding Intermediates, organized by **Wouter D. Hoff**. Invited speakers: **Wouter D. Hoff**, "Folding and Signaling Share the Same Pathway in a Photoreceptor Protein"; **Zheng-yu Peng**, "Structural Properties of a Molten Globule State". **Wouter D. Hoff**, Chair.

10.9.6 Biological Molecules in Solvent Free or Minimal Solvent Environments: Theory, organized by **Michael T. Bowers**. Invited speakers: **Robert B. Gerber**, "Vibrational Dynamics and New Force Fields"; **Todd J. Martinez**, "Photo-Induced Cis-Trans Isomerization". **David A. Dixon**, Chair.

10.9.7 The Dynamics of Evolution, organized by **Naeem Jan**. Invited speaker: **Ayşe Erzan**, "The Statics and Kinetics of the Evolution of Sex". **Mehran Kardar**, Chair.

Today, thanks to decades of effort by molecular biophysicists, the picture of a protein or other biological macromolecule as a folded chain is familiar to all scientists. In the mid 19th century, however, many of the best chemists believed there was a limit to the size of molecules. Proteins, they felt, were colloidal aggregates of smaller molecules. One of the first challenges to this prevailing view came with the pioneering work of Kekulé, in the 1850s. Many students are familiar with the apocryphal tale of Kekulé's discovery of the structure of benzene in a dream: six devils dancing in a circle, holding hands. But the idea of the carbon-carbon bond went far beyond benzene. He speculated that carbon-carbon links might lead to quite long molecules in which each atom "is connected only with one or a few neighboring atoms, just as in a chain link is connected with link."

Kekulé's idea of carbon-carbon bonds soon found its way into the realm of biological science through the work of his friend Eduard Pflüger. Working with albumin extracts, Pflüger pondered whether he might be working with "torn-off fragments of...vast molecules, which may well be as large as an entire creature". This view, of course, fit well with the vitalism of 19th century science that had replaced the "nature as clockwork" philosophy of the Enlightenment. Doubts crept in, however, when the great organic chemist Emil Fischer began to work on polypeptide synthesis. Since there could be such astonishing diversity even in small polypeptide chains, was there any need for molecules to form gigantic chains?

By the late 1800s, the thought of unraveling the chemistry of life seemed beyond reach. One scientist recalled decades later that "A very distinguished organic chemist, long since dead, said to me in the late [eighteen] eighties: 'The chemistry of the living? That is the chemistry of protoplasm; that is superchemistry; seek, my young friend, for other ambitions.' " Even Pflüger (1910) doubted that "in spite of the great exploits of Emil Fischer, the synthesis of protein will take up another century and the synthesis of living protein is hardly likely ever to succeed."

Several scientific trends fed the skepticism over the existence of "giant" (MW>5000) macromolecules. Early X-ray crystallographers were convinced that molecules could not be larger than the unit cell in their crystals, leading to the conclusion that large molecules were most unlikely to be found in nature. It was later shown that the unit cell can, in fact, be significantly smaller than a molecule, but at the turn of the 20th century the unit cell limit on molecular size was held dear by most crystallographers. Furthermore, colloid science, the study of molecular aggregates, was a "hot" field at the time, and provided an attractive alternative to long, curled-up molecular chains.

The macromolecule did have its champions, however. Years of experiments on polymers such as rubber convinced Hermann Staudinger that long-chain macromolecules did, in fact, exist in nature, held together by covalent bonds (*hauptvalenzen*) rather than secondary bonds (*nebenvalenzen*). But when he spoke on the subject at the Zurich Chemical

Society in the 1920s he was received with derision. A spectator recalled that most of the audience felt that "...it was impossible to accommodate his view in the unit cell established by X-ray analysis. All the great men present...tried in vain to convince Staudinger of the impossibility of his idea.... The stormy meeting ended with Staudinger shouting '*Hier stehe ich, ich kann nicht anders!*' [Here I stand, I cannot do otherwise!] in defiance of his critics." Despite his Martin Luther-like stand, Staudinger was curtly told by a colleague after the meeting that "molecules with more than forty carbon atoms should not exist." The same colleague later wrote him "leave the concept of large molecules well alone; organic molecules with a weight above 5000 do not exist. Purify your products, such as rubber, then they will crystallize and prove to be lower molecular substances."

But more accurate measurements of molecular weight gave the lie to this advice. Careful experiments by Svedberg using the ultracentrifuge, which he invented in 1924, allowed the precise measurements of proteins and nucleic acids with molecular weights far higher than 5000. These observations spurred crystallographers to revise their unit cell hypothesis, and support grew for the idea that large molecules did exist in nature. Svedberg, however, spun down a sidetrack when he noticed that most of the proteins he "weighed" had molecular weights that seemed to be multiples of the weight of albumin. He

proposed this as a basic unit of molecular weight! Other researchers chimed in with a mathematical formula for different "protein classes", of weights n , $2n$, $3n$, and $6n$, where n was the "unit weight" of albumin. Pauling and Niemann provided a voice of reason in the pages of *Science*, writing in 1939 that it was unlikely that Svedberg's rule would be "adhered to rigorously." They speculated that the phenomenon "stabilization of molecules of certain sizes...is to be given a biological rather than a chemical explanation – we believe that the existence of molecular weight classes of proteins is due to the retention of this protein property through the long process of the evolution of species."

As the idea of the existence of large molecules gained wide acceptance, biological scientists were quick to grasp its implications. The idea of chromosomes as large, single molecules, was immediately put forward. (Though, due to the initial difficulty of separating histones from nucleic acids, debate raged over whether the genetic material was nucleic acid or protein.) Unraveling how hereditary information was encoded in these macromolecules, was, of course, another matter....

All quotations in this article are from the first two chapters of The Path to the Double Helix: The Discovery of DNA, a fantastic – and highly recommended – book by Robert Olby (Dover, 1994).

*Disciplined Minds: A Critical Look at Salaried Professionals
and the Soul-Battering System that Shapes their Lives*
(Rowman & Littlefield, 2000) by Jeff Schmidt

Carta
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La macchina Usa del consenso. Come si fabbricano i «professionals»

Intervista a Jeff Schmidt raccolta da
Stefano Sensi

«DISCIPLINED MINDS», menti disciplinate. Un libro che parla con intelligenza della condizione attuale dei «professionals» americani. Una massa intellettuale che svolge mansioni iperspecializzate ma assai poco gratificanti. Jeff Schmidt, laureato in fisica alla University of California at Irvine, allievo del Premio Nobel Frederick Reines, con umorismo, ma anche ferreo senso critico analizza il mondo del lavoro «intellettuale» americano. Schmidt punta il dito su un sistema educativo che, disastroso a livello di scuola secondaria, diventa a livello universitario un formidabile strumento per selezionare menti disciplinate, per produrre intellettuali organici al sistema [Jeff confessa una passione per il nostro Gramsci].

Il libro ha un incipit drammatico: «Questo è un libro rubato».

Un libro rubato, perché?

Ho preso lo spunto dal famoso libro di Abbie Hoffman «Steal this book», ruba questo libro. Volevo dimostrare come ci si può riappropriare del proprio tempo, cominciando da quello speso sul lavoro. Impegnandolo, cioè, in attività realmente creative. Ho scoperto, amaramente, che non è possibile. Sulla carta, la prestigiosa rivista «Physics Today», di cui sono stato redattore per 19 anni, è paladina di un ambiente di lavoro informale, con orari flessibili. Ciononostante quando il direttore della rivista ha letto la frase che apre il libro, mi ha licenziato in tronco. Ho scritto questo libro invece che giocare al solitario o fare il surfing su

internet, nel tempo liberato dal lavoro. Ciò, apparentemente, non è ammissibile. Uno dei concetti chiave di questo libro è che il sistema controlla minuziosamente gli aspetti politici del lavoro intellettuale. Ho ora scoperto che il controllo si estende anche al tempo libero o meglio, liberato dal lavoro.

Chi sono i «professionals»?

La mia definizione è un po' differente da quelle ufficiali del ministero del lavoro o delle agenzie di censimento. Mentre queste puntano sul livello di educazione, io ho focalizzato il mio interesse sulle implicazioni politiche dell'operato dei «professionals». Sono lavoratori sì con un alto grado di educazione, ma sono soprattutto i professionisti organici al sistema. Sono medici, avvocati, giornalisti, insegnanti ma anche attori o ispettori di polizia per esempio. Quelle figure cioè che con le loro decisioni avvallano il sistema perpetuando lo status quo.

La percezione comune è che i «professionals», in quanto più istruiti, siano anche più progressisti.

È un' incredibile mistificazione. In effetti sono molto *liberal* su tematiche generali ed astratte. Quando li si tocca nel loro specifico, cioè sulle implicazioni politiche delle loro attività professionali, il discorso cambia. Faccio l'esempio del medico «di sinistra» sempre pronto a scagliarsi contro l'ingiustizia del sistema durante un cocktail party, ma che molto più raramente vedrai, nel chiuso del suo ambulatorio, mettere seriamente in discussione i propri rapporti gerarchici con pazienti ed infermieri, o il sistema sanitario americano.

Un punto molto interessante del tuo libro riguarda l'accesso all'educazione, cardine di quell'«upscale mobility», mobilità verso l'alto, che è il fondamento dell'American Dream.

Nel libro paragono il sistema americano ad uno di quei truffatori che fanno il gioco delle tre carte nei mercati popolari. Ti abbindolano per farti credere che la scelta della carta giusta sia pressoché certa. Di fatto il numero chiuso all'università opera una selezione fortissima. Non c'è posto per tutti, al contrario solo pochissimi vengono selezionati: pensa al caso delle facoltà di medicina con un posto ogni 17 mila abitanti. Una selezione che mira a scegliere i più docili.

In che maniera?

Attraverso lo sproporzionato use di tests e l'atteggiamento fideistico nei confronti di essi. Una delle più grosse mistificazioni operata dal sistema è quella di proporli come «asettici» strumenti di selezione dei più preparati. In realtà sono non solo fortemente «biased», parziali, per classe e genere, ma strutturati in maniera tale da valutare, soprattutto, il grado di potenziale subordinazione. Gli studenti che passano, o, come preferisco dire, vengono fatti passare, sono infatti quelli che più acriticamente si dimostrano propensi a studiare su libri di quiz invece che sui libri di testo veri. Si è di fatto creata una situazione paradossale, per cui lo studente, invece che essere incoraggiato ad utilizzare processi logici induttivi e deduttivi, è praticamente indirizzato a memorizzare le risposte esatte dei quiz.

Nel libro, cito l'esempio di uno dei miei più brillanti compagni di studi che, caparbiamente, tentò di superare un difficilissimo esame del dottorato di fisica preparandosi sui libri di teoria, rifiutandosi, cioè, di umiliare la propria intelligenza con lo studio delle risposte «precotte» dei quiz. Fu uno dei pochi a non passare l'esame.

Muovi anche una critica alle linee di ricerca nell'università.

Sì, nonostante che nell'opinione pubblica prevalga il mito delle università come centri in cui si promuove ricerca mossa solo da genuina curiosità scientifica, di fatto il primum movens è il denaro. La maggior parte dei ricercatori è forzata a cercare fondi statali o privati appiattendosi i propri interessi scientifici su quelli che sono gli interessi economici prevalenti. I ricercatori continuano a vivere nella mistificazione di essere i soli gestori del proprio tempo ed interesse scientifico. In realtà proprio per questo sistema di finanziamenti che premia la profittabilità delle ricerche, i ricercatori sono fortemente eterodiretti.

La commistione di interessi economici e scientifici sembra molto più evidente nel campo delle scienze bio-mediche e fisiche che non in quello umanista, è così?

Il condizionamento economico avviene anche nel campo umanista, ma in maniera più sottile. La chiave in questo caso è la sempre minore offerta di «tenured positions» [le nostre cattedre «permanenti»]. E' interessante notare come ci sia nell'università americana, sempre più forte, la tendenza a privilegiare «tenured

positions» nelle scienze bio-mediche e fisiche, le discipline cioè che generano profitto. Al contrario, le discipline umanistiche sono viste come una costosa e forse inutile appendice, i cui costi sono da ridurre all'osso. Pullulano dunque gli incarichi a contratto.

Posizioni facilmente ricattabili, in cui il licenziamento può avvenire da un giorno all'altro.

In linea, dunque, con il mantra della «new economy», la flessibilità. «Temporary workers» anche nel settore educativo.

Flessibilità nei confronti del mercato del lavoro, ma una flessibilità mentale, anche. Alla rovescia però. Creare, cioè, una manodopera intellettuale dalle forti conoscenze tecniche che non sia tuttavia in grado di percepire le contraddizioni del sistema e dunque incapace di muovere una critica globale al sistema di valori correnti. Docili intellettuali-tecnici, usa e getta, da impiegarsi al bisogno. Se paragoni le tecniche di controllo che vengono utilizzate da istituzioni totali come l'esercito e le pratiche educative nell'università, scopri che vi è una forte analogia. Prendi, per esempio, il caso dell'isolamento. Gli studenti vengono sottoposti a carichi di lavoro sempre più imponenti. Ne risentono i contatti con l'esterno, che diventano sempre più labili: meno tempo per frequentare amici e famiglia, meno tempo per la lettura di libri e giornali.

Durante il dottorato, per esempio, molte università vietano di lavorare. Questo divieto ha in effetti un forte connotato politico. Non viene proibito allo studente di lavorare *tout court* e gli vengono, infatti, offerti lavori «on campus». Quelle che vengono proibite sono le attività lavorative «off campus», il contatto, cioè, con il reale mondo del lavoro.

Gr Esteri <

Ricerca >

La ricerca scientifica negli Stati Uniti

Intervista a Jeff Schmidt, autore del saggio 'Disciplined minds'
Giancarlo Rossi

*(foto Ansa)*

Roma 15/04/2002 17:05

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*Disciplined Minds: A Critical Look at Salaried Professionals
and the Soul-Battering System that Shapes their Lives*
(Rowman & Littlefield, 2000) by Jeff Schmidt

Education Review
11 December 2000

An abridged version of this review appears
in the March/April 2001 issue of
The Adjunct Advocate (circ. 60,000)

Disciplined Minds

Reviewed by Andi O'Connor

Andi O'Connor is Assistant Professor of Cultural Studies in the Department of Educational Studies at Ohio University. She is currently studying the relationship between masculinities, peer group relations, and school violence. Her research interests include critical qualitative studies of gender, queer theory, and radical theories of education.

Disciplined Minds is a radical, disturbing, and provocative look at professional life. It offers a profound analysis of the personal struggles for identity and meaning in the lives of today's 21 million professionals. The book will shake up readers, particularly faculty members, graduate students, and others who participate in academic life.

This book represents critical theory in the best sense of the tradition: it is a well-written, compelling description of how graduate school, as well as professional training and practice, help reproduce social, political, and economic stratification. Luckily, this book also offers disheartened graduate students, soul-weary professors, and frustrated professionals a better understanding of the structural conditions that constrain their professional work, and ways to combat the conformity that is endemic to academic life.

Schmidt begins by discussing what he calls "widespread career burnout" among professionals—the chronic "workaholism," fatigue, isolation and depression common among many professionals today. "Professionals," he writes, "are not happy campers ... Ironically, such depression is most likely to hit the most devoted professionals—those who have been the most deeply involved with their work. You can't burn out if you've never been on fire" (pp. 1-2). The hidden root of this burnout and depression, Schmidt contends, is the professional's lack of political control over his or her creative work. In addition, the dissonance between the early goals of many professionals (e.g., to make a difference, to pursue a social vision, to

better oneself and society) and the relative powerlessness of professional practice creates disillusionment. According to Schmidt, graduate and professional schools are intellectual "boot camps" that systematically grind down students' spirit and ultimately produce obedient, rather than independent thinkers.

Timid Professionals

In Part One, "Timid Professionals," Schmidt outlines his basic thesis, that university professors, executives, and other professionals are trained to reproduce the inherently conservative and non-questioning ideology of large corporations, universities, and government agencies. Rather than fostering creativity, autonomy, and personal empowerment, professional schools create a skilled group of individuals who learn to subordinate their own goals to the goals of the institution. He claims that professional training produces "servants, not critics" (p. 175)

To qualify for professional training and employment, individuals must exercise what Schmidt calls "ideological discipline," the ability to approach work with creativity and enthusiasm, but without questioning or seriously challenging the overall conservative and socially reproductive goals of the institution or employer. He writes, "The resulting professional is an obedient thinker, an intellectual property whom employers can trust to experiment, theorize, innovate, and create safely within the confines of an assigned ideology. The political and intellectual timidity of today's most highly educated employees is no accident." (p. 16)

One intriguing aspect of this book is Schmidt's definition of the commonly used but rarely defined word, "professional." He cautions against confusing the term with "white collar worker," and claims that most white collar workers today are non-professionals. He categorizes lawyers, teachers, counselors, nurses, doctors, engineers, scientists, professors, actors, and executives as professionals. He excludes from his definition of professionals those who hire and fire professionals (e.g., upper level-executives) as well as para-professionals such as clerical workers, paralegals and teachers' aides. What distinguishes a professional, he claims, is not just advanced knowledge and technical skill, but advanced *schooling* or "paper credentials." Professionals are a product of the schools.

Schmidt challenges the popular belief that professionals are independent practitioners, such as self-employed doctors or lawyers. He writes that the overwhelming majority of professionals (i.e., 8

out of 9) are salaried employees rather than independent practitioners. Thus, when writing about professionals, he has salaried employees in mind.

Schmidt also critiques the widespread belief that today's professionals embody neutrality. Arguing that professionals are indeed politically committed, Schmidt writes, "Many people naively think of professionals as nonprofessionals who possess additional technical knowledge or technical skills. Professionals do exercise technical skills, of course, but it is their use of political skills that distinguishes them from nonprofessionals. The product of professional labor is political. It takes sides." (p. 41)

From Schmidt's perspective, professionals' own view of *themselves* as politically neutral supports their political commitments. By posing as disinterested experts, professionals actually serve the interests of the dominant class.

Schmidt also examines popular misconceptions about professional work. In the section, "Assignable Curiosity," he demonstrates that professionals—university professors in particular—have much less control over their own research than is generally thought. He describes how the needs of major corporations and government agencies drive university research. In particular, he discusses the profound influence of government grants in determining what researchers choose to study.

Another popular and powerful notion that Schmidt refutes is the belief that more highly educated people tend to be more creative, independent, and liberal. In making this argument he draws an important distinction between being conservative or liberal in one's personal beliefs, which have little social impact, and being conservative or liberal in the beliefs one acts upon at work. The latter, Schmidt contends, have the greatest social impact, and it is in this arena that many seemingly liberal and left-leaning professionals (such as university professors) are surprisingly conservative. Claiming that the academy is an essentially conservative institution, Schmidt cites the Chronicle of Higher Education finding that only 5% of professors identify themselves as "radical" or "left" of the political mainstream.

Examining the Examinations

Central to the production of ideologically correct professionals are mechanisms for selecting and excluding candidates

for the programs that eventually qualify individuals for professional work. In the chapters, "Ugly Scene at the Narrow Gate," "Examining the Examination," and "Gratuitous Bias," Schmidt provides an in-depth look at the ways professional workers are selected.

The first of the selection mechanisms is the process by which students are chosen for admission to graduate programs and to advanced stages of graduate study. In particular, Schmidt focuses on the standardized tests administered prior to admission to graduate school and the comprehensive faculty-developed tests administered in order to admit graduate students to advanced course work or dissertation candidacy.

He explains that tests, rather than assessing knowledge and creativity, actually measure students' ability to alienate themselves from authentic learning. Students who take the time to reason out problems in a creative way often fail to perform well on timed, standardized tests. These tests tend to privilege rote memory, speed, and close interpretations of text. According to Schmidt, standardized tests serve to screen out students who have "inappropriate" values or inadequate "ideological discipline" (p. 170)

The tests' instructions to pick the "best" answer means that the successful student is the one who either shares the testers' values or senses those values and adopts them for the examination.... This unconscious ideological discipline that the latter approach represents is the preprofessional's first step toward the more developed ideological discipline that characterizes the professional. (p. 170)

Schmidt claims that faculty members typically use comprehensive exams, which are usually not standardized, to "weed out" unsatisfactory students—those who delve too deeply into a particular topic, don't show enough "general knowledge," or answer questions in ways that professors deem unsuitable. Citing the field of physics in particular, Schmidt tells the story of one student who was dedicated to making his comprehensive examination a creative and useful experience. Unlike most students, this student studied books rather than old tests. He studied creative and non-traditional ways to solve traditional physics problems. Rather than being rewarded for his devotion to learning, he failed the exam, was subsequently barred from registering for classes, and was fired from his job as a teaching assistant.

From Schmidt's perspective, students who perform well on standardized tests and comprehensive exams demonstrate that they

are willing to "jump through the hoops" of graduate school. These students are willing to spend time and money preparing for standardized tests in order to gain entrance to graduate programs. Once admitted, they are willing to spend hundreds of hours studying for comprehensive exams on which they hope to provide answers that are pleasing to their professors. Schmidt claims that studying for comprehensive exams in graduate school serves as important preparation for other types of marathon efforts later in the professional career. He quotes a tenured professor of physics, who explained that the important qualities of a physicist are "discipline in work and tenacity to stick to problems" rather than technical knowledge or creativity. Thus, the testing system tends to favor the students who will eventually make the most "manageable employees"—students with a subordinate attitude and mainstream values" (p. 160)

Graduate School: Cult Indoctrination?

One of the most compelling and provocative discussions in the book is the author's examination of the experience of graduate school. In this examination, Schmidt draws parallels between graduate school programs and cult indoctrination. Elaborating the thesis that professional schools serve more to indoctrinate than to teach technical skills, Schmidt details how graduate students are subjected to crushing reading loads, mindless grunt work in labs, and mind-numbing tasks of memorization. In addition, he describes the ways that students' experiences resemble those of individuals being initiated into a cult. Like new cult members, graduate students are often isolated from friends and family, they are placed in the hands of an elite group of "experts," whose judgments they must accept uncritically, and they are asked to devote nearly all their time and energy to "the cause."

Drawing on data from his interviews with graduate students, Schmidt identifies themes common to both the cult and the graduate school experience:

- Big Promises (recruitment promises and dreams of increased power and independence);
- Milieu Control (lack of outside social life, long working hours for little or no pay, little or no time for critical examination of the group's ideology);
- Unquestioned Authority (inability to challenge the opinions and practices of the experts in charge);
- Guilt Tripping and Shaming (members come to believe they

- are unworthy, both personally and professionally);
- Total Personal Exposure (exposure of all details of the member's life to the group);
- Scientific Dogma (the use of "sacred science" to legitimate the group's core values);
- Taking Away True Self-Confidence (belief by those in charge that the initiate's self-confidence stands in the way of his or her total commitment to the group); and
- The Only Path to Salvation (graduate school or the group is the individual's last chance for a better life.)

Schmidt does point out that professional training is not *always* like cult indoctrination. For example, he describes his own graduate experience as a "great and rewarding time" (p. 219). While acknowledging the positive features of his graduate study, Schmidt notes that many other students in his program "emerged looking and acting like broken versions of their former selves" (p. 219)

Resisting Indoctrination

In the final section of the book, Schmidt turns to the question of resistance. He discusses how graduate students, professors, and other professionals can resist the conformity of professional life. In the chapter titled, "How to Survive Professional Training With Your Values Intact," Schmidt draws on an unlikely source—the US Army Manual used to teach potential prisoners of war how to resist indoctrination. He writes, "In graduate school, as in the POW camp, the toughest struggle is not over whether you will survive the process, but over what sort of person you will be when you get out" (p. 239)

Key to resisting indoctrination, writes the author, is organizing. The students he interviewed who successfully survived graduate-level professional training did so because they agitated for change, developed social and psychological supports outside of the institution, and spent time with like-minded individuals and groups. According to Schmidt, students who try to resist the system on their own are rarely successful, usually succumbing to pressures to change their own values and practices.

The final chapter, "Now or Never," outlines how professionals in all fields can maintain a sense of integrity and purpose within the mainstream workplace. As Schmidt points out, making a difference and working for social change do not require one to be employed by a non-profit, reform-oriented organization.

What they do require, however, is that one take a stance as a "radical professional" (p.265). Such a professional continually critiques the social role of the institution and system for which he or she works. In addition, radical professionals understand and question their place as workers within a conservative system, and they refuse to buy into the mystique of the independent, self-directed professional. To remain a radical professional requires ongoing effort, one that incorporates a variety of strategies, such as dropping the use of elitist titles (e.g., "Doctor" and "Professor"), building coalitions between professionals and non-professionals, and reading non-mainstream and radical journals.

Reproduction and Resistance

Schmidt offers a powerful examination of the relationship between professional life, professional schooling, and the perpetuation of social and political hierarchies. Its arguments unmask the subtle conservatism and indoctrination endemic to professional training as well as to professional employment. Ultimately, the book succeeds in laying out a strong case for the radicalization of professionals. Whereas most critical studies of education focus on social reproduction in elementary and secondary schools, Schmidt's analysis examines how these mechanisms play out in graduate education and induction into the professional career.

As with many analyses based on social reproduction theories, Schmidt's examination tends to over-generalize. He does include some examples of student experiences from other fields, but by basing his observations largely on just one field (i.e., his own field of physics), he seems to imply that all graduate education is equally conservative, demanding of personal compromise, and inhospitable to a diversity of views.

The book would also benefit from the inclusion of other voices. I wanted to hear from graduate students in disciplines other than physics, and I was looking for narratives about resistance. In particular, I wanted to hear stories from students who had resisted the system completely and chosen different paths altogether.

These are minor points, however, compared to the central weakness of the book, namely Schmidt's failure to address questions of methodology. Although he uses powerful examples presumably collected from interviews with students, Schmidt never explains how he went about collecting this information. Despite the fact that the book was intended for a mainstream audience, the author still should

have provided some discussion of the theoretical framework guiding his work and the methods used to accomplish it.

Another problem is Schmidt's inattention to the actual experiences of practicing professionals—both those who conform and those who resist. While providing examples of how students resist conformity in graduate school, he seems to ignore examples of how currently employed professionals offer resistance. This important oversight leaves the reader with the impression that all professionals are hapless cogs in the machinery of social reproduction. Discussion of the types of resistance undertaken by practicing professionals would have offered support for the recommendations presented at the end of the book.

Finally, Schmidt's analysis would have been improved if it had drawn on relevant theory. For example, he might have used feminist theory to consider the ways marginalized groups in the academy have resisted domination. Work by feminist philosopher, Jane Roland Martin addresses some of these issues quite poignantly. Schmidt would have strengthened his arguments by connecting them to related theoretical interpretations offered by feminists such as Martin or neo-Marxists such as Jean Anyon.

Despite some significant weaknesses, *Disciplined Minds* still offers a powerful analysis of the impact of professional work on our minds and hearts. Moreover, Schmidt offers concrete suggestions helpful to fellow travelers who feel trapped by "the system." These suggestions enable us to reaffirm and act upon the original commitment we made to use our life's work to promote social good.

Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives
(Rowman & Littlefield, 2000) by Jeff Schmidt

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Disciplined Minds

Review by Mike Ryan

The status of “professional” in America indicates to the masses that you have made something of yourself. You have become one of the best and the brightest. But what sort of Faustian deal had to be made to get there? The “best and the brightest” Americans, as historian Howard Zinn has pointed out, are the people who have engineered atrocities like the Vietnam War. More recently, these engineers have been manufacturing the consent of the two biggest American historical events so far in the 21st century: the farcical 2000 U.S. presidential election and the ambiguous terror of the War on Terrorism. And where do these astute professionals come from? They are products of the American education system, of course.

In 1967, an English professor at Cal State L.A. named Jerry Farber declared in his underground classic essay “The Student as Nigger,” “Back in kindergarten you found out that teachers only love children who stand in nice straight lines. And that’s where it’s been at ever since. Nothing changes except to get worse. School becomes more and more obviously like a prison.” If that’s true, then what are the effects on the “inmates” after being there for 12, 16, or even 20 years if they want to become professionals or attain graduate degrees? Jeff Schmidt addresses the tail end of this question and explains what can be done about it in his book *Disciplined Minds: A critical look at salaried professionals and the soul-battering system that shapes their lives*.

Schmidt received a PhD in physics from the University of California, Irvine, taught physics around the world, and until May 31, 2000, was an articles editor at *Physics Today* magazine. After publishers Rowman & Littlefield released his book, *Physics Today* fired him, citing the book’s very existence as evidence that he was not “fully engaged” at work. Of course, that’s the main idea within the book. No sane employee in a hierarchical institution, Schmidt argues, can be fully engaged in his or her work, because the company’s interests are in conflict with the employee’s personal interests.

Management’s abrupt termination of Schmidt also responded to the opening lines of *Disciplined Minds*: “This book is stolen. Written in part on stolen time, that is. I felt I had no choice but to do it that way. Like millions of others who work for a living, I was giving most of my prime time to my employer. My job simply didn’t leave me enough

energy for a major project of my own, and no one was about to hire me to pursue my own vision, especially given my irreverent attitude toward employers.”

In Schmidt’s defense, he worked at *Physics Today* for 19 years and consistently received satisfactory or above average performance reviews as well as pay raises and promotions. Obviously, he had been doing his job. However, *Physics Today* management dismissed him because, “The employee admittedly used company time to work on a personal project over an extended period of time” (Schmidt, “State Rejects *Physics Today*’s Charge of Employee Misconduct,” <http://disciplined-minds.com>). To put the company’s accusation in perspective, consider another time thief: Albert Einstein. Einstein did a lot of his physics theorizing while at work at the Swiss patent office, including his discovery of the notoriously subversive equation, $E=mc^2$.

However, wasting time on the job is not why Schmidt was fired. *Physics Today* fired Jeff Schmidt because he is a radical, activist professional. “The hidden root of much career dissatisfaction is the professional’s lack of control over the ‘political’ component of his or her creative work,” he says in *Disciplined Minds*. *Physics Today*’s management would, of course, reject the idea that such a political component even exists. Ironically, however, they drew attention to it by firing Schmidt over his political expression.

While Schmidt would agree with Farber that the education system as a whole works to create obedient people, in *Disciplined Minds* he narrows his focus to graduate and professional training, which, he says, “ultimately produces obedient thinkers -- highly educated employees who do their assigned work without questioning its goals. Professional education is a battle for the very identity of the individual.”

Schmidt examines and criticizes the professional credentialing process by recounting his own struggles in graduate school, assailing GRE and other professional testing results as nothing more than gauges that determine a person’s willingness to be an obedient thinker, and describing the conditions graduate and professional students live under as amounting to something like that of cult indoctrination: Exhaustion, isolation, humiliation, etc., over a period of years. Schmidt’s cult indoctrination theory manifested itself after he interviewed students and found their stories uncannily similar to this type of brainwashing process.

A totalitarian graduate/professional school experience is not the one all students will have, Schmidt says, but “for students who aren’t careful, it will be.” So, while graduate school for Schmidt “amounted to getting paid to pursue [his] own interests, for many other students in the very same program, graduate school was unrelentingly stressful; they emerged looking and acting like broken versions of their former selves.”

If you want to become a professional, then, how do you maintain your individuality throughout such a process? You become an iconoclast. You question authority.

Schmidt comes to the brilliant conclusion that the United States Army's Field Manual No. 21-78 is a resourceful handbook for those students who wish to maintain their identity instead of giving it up to a totalitarian process. The manual was written to teach U.S. soldiers how to resist brainwashing and exploitation as prisoners of war, and Schmidt finds that it transfers over surprisingly well to the intellectual boot camp known as graduate or professional school.

Using points made in the field manual and drawing on his own experiences as an activist grad student and professional, Schmidt puts together a chapter called, "How to Survive Professional Training with Your Values Intact." The point of this section is that "the student in professional training faces a tough choice: Organize or conform; confront or be obliterated."

In the last section of the book, called "Now or Never," Schmidt lists actions that anyone can take in their workplace or educational institution to maintain their value system. The main purpose behind all of the actions is to create a network of like-minded individuals, which will allow its members to maintain their personal perspectives. "People are individuals biologically," he says, "but they are individuals socially only if they maintain an independent perspective, and doing this is an ongoing creative process based on critical thinking." So, ranging from subscribing to radical publications to whistle-blowing to organizing unions to sabotage, Schmidt gives a wide range of actions limited only by the daring of the activist in question and meant to help people foster independent minds opposed to disciplined minds.

Jeff Schmidt is still working on getting his job back, relying on public pressure, the large amount of which has surprised even Schmidt. The book's website at <http://disciplined-minds.com> has a big section on efforts to help get his job back that includes letters to *Physics Today* management from hundreds of people including Noam Chomsky and Nobel Prize winning scientists. Whether or not Schmidt succeeds, this penalty on *Physics Today*'s reputation is a form of justice, and a warning to authoritarian hierarchical structures everywhere.

Disciplined Minds is not just for professionals. While they are the target audience, it's revelation is just as important for non-professionals, especially those who may feel inferior to the institutional elite who influence most aspects of our lives; from teachers to police officers, journalists to politicians, and lawyers to doctors, just to name a few.

The difference between the established professionals and the rest of us is that they have indeed engaged in a Faustian deal with the education and professional system that they have likely not resisted but have swallowed hook, line, and sinker to become part of the highly touted professional class. But knowledge rules supreme over nearly everyone. Understanding that the professionals' facade of power is just that, they don't seem to have as much authority anymore, and those who perhaps felt inferior could feel more confident and become more likely to question the so-called "expert" and "authoritative"

professional opinions and the structures behind them. In doing so they will affirm their worth as a human being, and they may find allies with more access to institutional machinery in professionals like Jeff Schmidt, who are willing to take on the higher sources of authority and risk their livelihood and reputation while making changes from the inside.

Losing Their Religion

By Garance Franke-Ruta

In college, my aspiring social-activist friends -- meritocrats from humble beginnings, all -- dreamed of an education that would give them the power to make a difference in the lives of impoverished immigrant Korean women or improve the transparency of the political campaign system. So they dutifully went to law school or enrolled in graduate programs in political science. Now, as they near graduation, some of them talk of the intellectual satisfactions of protecting major-label record companies against Internet interlopers or of maximizing the efficiency of New York's workfare program. What happened?

Is it that the graduates, older and wiser, have found a weakness in their adolescent dreams of social justice and democratic improvement? Or is it that the system of graduate education itself eviscerated their aspirations?

D.C. resident Jeff Schmidt would say that these newly minted professionals are still making a difference in society -- just not the kind they'd once hoped to make. Indeed, he argues in *Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives* (Rowman & Littlefield) that students' professional choices -- and the lifetime of decisions they can look forward to making as professionals -- have a more powerful impact on democracy than their votes do. The reason, he says, that 80 percent of the entering students at Harvard Law School say they want to pursue a career in public service but 90 percent take jobs at corporate law firms after graduation is that the professional world demands their "ideological discipline," or adherence to an assigned point of view. Professional education transforms not just what you know, but who you think you are as well.

Schmidt, a former editor of the College Park, Md.-based science monthly *Physics Today*, has collected two decades of reflection on the problem of graduate training and professional life into his 280-page book. Schmidt holds a Ph.D. in physics from the University of California, Irvine, but you don't have to be a laser jock or lab rat to see that graduate programs combine sleep deprivation, too much work, rigorous competition, social isolation, and pressure to pursue particular pathways -- and force students to accept the regimen or be booted from the program. This is a strategy designed to reshape a young person's social and political preferences, says Schmidt. "[Students] enter professional training with deeply held feelings about the personal and societal promise of professional work, and during professional training struggle against what often amounts to a brutal attempt to change their very identities," he writes. The struggle of their lives, as any disgruntled associate at a law firm will tell you, is to square their beliefs with the bullying of their profession.

To lessen the conflicts, says Schmidt, the professions require that future workers be

transformed while they're still trainees. These transformed employees then can "work within an assigned ideology rather than from a specific list of tasks, because the professional works with unpredictable events," says the 54-year-old author. And so the creative work goes to those who can be trusted not to stray from the path, while more creative types often find themselves working as waiters. (Schmidt does not except journalists from his critique of the professions.)

Schmidt's effort to help grad students resist their indoctrination through such chapters as "How to Survive Professional Training with Your Values Intact" was met with some resistance at *Physics Today*. In late May, Schmidt was fired after 19 years on the job, he says, for allegedly writing the book on company time. He successfully contested that charge with the State of Maryland Department of Labor and is now collecting unemployment benefits.

"The people who were most concerned about others seemed to be the least likely to survive," says Schmidt of his time in grad school. Not much seems to have changed for him, even in the working world.

Photo caption:

We're All Dissonant Beings: Jeff Schmidt with future worker (and daughter) Joshua Rose Schmidt

Photo by Charles Steck, *Washington City Paper*.

Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives
(Rowman & Littlefield, 2000) by Jeff Schmidt

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Review of Jeff Schmidt's *Disciplined Minds*

by Brian Martin

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Why aren't there more radical teachers? Is it just the difficulty of being radical in a system built around compulsion, discipline, conformity, and reproduction of the class structure? Or is part of the problem the way that people become teachers? Indeed, why is it that so many educational radicals were never formally trained as teachers?

Jeff Schmidt provides an answer in his book *Disciplined Minds*: professionals, including teachers, are selected and molded to have politically and intellectually subordinate attitudes, thereby making their creative energies available to the system. In short, "professional education and employment push people to accept a role in which they do *not* make a significant difference, a politically subordinate role." (p. 2). Schmidt's critique covers all professionals and is worth examining before returning to the specific challenge facing radical teachers.

The first step in Schmidt's argument is the claim that professionals - including police, doctors, lawyers, teachers and many others - think less independently than nonprofessionals. He cites opinion polls taken during the Vietnam war showing that support for the war was greater among those with more higher education. But what about the widespread perception that professionals have more progressive views on issues ranging from crime to capitalism? Schmidt says that professionals may have progressive views about *distant* social issues, but in the workplace - and in the work itself - professional attitudes prevail, and they are uncritical. Specifically, they are against democratization in their own work. Indeed, do you know many lawyers who support free training for litigants to represent themselves, doctors who favor making it easier for people without medical qualifications (such as experienced nurses) to practice medicine or indeed many teachers who support opening jobs in schools to anyone, with or without degrees or teacher training - or letting students run classes without teachers?

Schmidt argues that what really makes an individual a professional is not technical knowledge, but rather "ideological discipline."

"Those who employ teachers see them as more than workers who present the official curriculum to the students. A computer or television system could make such a presentation. An important role of the schools is socialization: the promulgation of an outlook, attitudes and values. ... The professional is one who can be trusted to extrapolate to new situations the ideology inherent in the official school curriculum that she teaches." (p. 32).

Professionals do "political work" but in a way that is not seen as political. Being "professional" is, in essence, accepting this hidden political role.

"As a professional, the teacher is 'objective' when presenting the school curriculum: She doesn't 'take sides,' or 'get political.' However, the ideology of the status quo is *built into* the curriculum. The professional's objectivity, then, boils down to not challenging this built-in ideology." (p. 32).

When teachers are fired, it is seldom for being incompetent teachers. Usually, it is for challenging the system in some way, such as not teaching the curriculum. Schmidt provides examples of doctors and other professionals with fake credentials who are able to survive quite all right in their jobs, as long as they have the right attitudes.

A key to creating docile professionals is professional training. Through their training, budding professionals learn to orient their intellectual effort to tasks assigned to them. Schmidt has a wonderful expression for this: "assignable curiosity." Children are naturally curious about all sorts of things. Along the road to becoming a professional, they learn how to orient this curiosity to tasks assigned by others.

Consider, for example, a typical essay in a university class. The teacher sets the topic and the students write on it. To do really well, students need to figure out what will please the teacher. If the teacher had assigned a completely different topic, the conscientious student would have directed effort to that topic. Well-trained students do not even think about writing about topics that are not assigned. They wait to be told where to direct their curiosity.

Schmidt has a teaching credential and has taught junior high school math in Pasadena, California and in El Salvador. However, it is his experiences pursuing a PhD in physics that come through most strongly in *Disciplined Minds*. "Assignable curiosity" has a special significance for researchers. Military funding of science, for example, works well to direct research into military-relevant directions because scientists are willing to take up whatever project is offering. When scientists put in research proposals to military funders, they anticipate what will be most useful and attractive for military purposes, while maintaining the illusion that they are directing the research.

Nearly half of *Disciplined Minds* is devoted to selection of professionals, a process that weeds out most of those whose attitudes are not appropriate and molds the survivors into a narrow political mindset. On entering professional training, Schmidt says, students are optimistic and idealistic. On leaving they are "pressured and troubled" because they have gradually submerged their ideals and become willing to join the occupational hierarchy. So different are they on completion of training that "the primary goal for many becomes, in essence, getting compensated sufficiently for sidelining their original goals" (p. 121).

What drives this transformation? One factor is discrimination. A nasty dimension is sexual and racial harassment in training for careers such as in the police and engineering. However, this type of "selection pressure" has the disadvantage of being widely recognized as inappropriately discriminatory. Far more accepted is the role of examinations, which are seen as neutral but which, Schmidt argues, are actually quite political.

Many students are terrified of exams, especially qualifying exams which can determine whether or not students can enter their occupation of choice. Failing is humiliating as well as representing a waste of enormous effort. So most students put plenty of effort into making sure they will pass. That means that they have to set aside what they'd really like to learn and instead to prepare intensively for likely questions. This is further training in assignable curiosity, but now the stakes are higher. Exams usually present tasks that are small components of the actual work of a professional. This, plus time pressures, encourages a narrow, instrumental approach to learning.

Students who prefer to follow their own curiosity are more likely to be put off by the exam system and drop out, or to do poorly. Those who are most eager to do well not only study likely questions intensively but also do what they can to ingratiate themselves with teachers and to better understand what is expected of them. Exams thus favor those least critical of the status quo. "The social framework imposed by the examination problems and by the rest of the qualification system maps out a domain of allowed activity that ultimately becomes the playpen of the nonradical credentialed expert and the cage of the individual working for progress in the social structure." (p. 178).

Exams are a powerful legitimating tool because they can discriminate while seeming to be neutral. Schmidt scrutinizes biases in standardized tests, showing how test makers remove gratuitous cultural biases, leaving the structural bias that picks out compliant workers.

The system raises the aspirations of many but provides winning tickets - coveted professional jobs - to only a few. What of the disgruntled losers? Why is there not more protest about the unfairness of hierarchy and privilege? Schmidt argues that the system, to reproduce itself effectively, has to "cool" losers off. One way to accomplish this is to give advice to students. A recalcitrant (namely, self-directed) student might be told that, to succeed, she will have to work harder at mastering the requirements set down for her:

perhaps understanding key theories, solving standard problems or looking at things from a "balanced" viewpoint. A student given such advice may then "decide for herself" that she doesn't really want to pursue the grueling road of redirecting her interests in teacher-specified ways.

Schmidt notes that "cooling-out work," to be effective, needs to be hidden. The exam system works extremely well in this because it appears to be nonpartisan while actually imposing the values of the status quo.

Training is only the initial stage in producing compliant professionals. A few radicals slip through the training process, and others become radical on the job. But not that many. For a professional to argue for democratization at work, especially if it means undermining the privilege and status of professionals, is commonly seen as heresy, rather like a unionist arguing for lower pay.

Schmidt gives several examples of professional associations that have avoided "political" activity. For example, "the National Lesbian and Gay Journalists Association decided not to participate in the massive 25 April 1993 gay rights march on Washington, an event that drew several hundred thousand people, making it one of the largest civil rights demonstrations in American history. Leroy Aarons, the group's president, explained that members didn't want to endanger their 'credibility in the industry'." (p. 206). Individual professionals who step out of line, or who simply take some sort of initiative, are regularly penalized. "Meanwhile, they see that coworkers with take-the-money-and-run attitudes are hassled less." (p. 210).

In developing his critique of professions, Schmidt draws on his own experiences and uses extensive quotes from correspondents, such as graduate students who became aware of the political nature of their training. This makes for an engaging account that feels authentic rather than remote in the conventional academic style.

Readers familiar with literature on the sociology of professions and the sociology of education may be surprised that Schmidt has few citations to it. He makes no mention of works on the professional-managerial class, such as Alvin Gouldner's well known *The Future of Intellectuals and the Rise of the New Class* (1979), nor of critiques of professions such as Randall Collins' *The Credential Society* (1979). Actually, Schmidt knew about such works but decided not to mention them because he found that they were not necessary to his argument. This may reflect his physics training. A social scientist would naturally become familiar with "the literature" and refer extensively to it, in order to show how their contribution relates to it. A theoretical physicist, on the other hand, may start out with a theoretical framework, such as Schrödinger's equation in quantum mechanics, and derive logical consequences from it, without having to cite prior or related work.

That is essentially what Schmidt has done in *Disciplined Minds*. The book's analysis is

quite rigorous in its own terms. Schmidt has set various challenging fundamental questions for himself, such as why theory is more prestigious than practical work, systematically examined possible answers and then made a conclusion based on logic and evidence. His intellectual framework for this task can generally be characterized as a critique of domination and inequality coupled with support for egalitarianism and democratization. The result is bold and refreshing. While *Disciplined Minds* misses the more elaborate structural theories and empirical evidence from works in the sociology of education and professions, it redresses a key shortcoming in these works, namely a concern for analysis without ideas for change. Schmidt's voice has the authenticity of experience and concern, and thus has a much more subversive quality.

So while there are some sections in the book where an engagement with other literatures, such as critiques of credential systems or analyses of hegemony, might have added insight or nuance, in other sections Schmidt tackles areas that are neglected elsewhere, such as "cooling-out work." Arguably, working out his own framework was what enabled him to make his most original contributions.

Another limitation of *Disciplined Minds* is its restriction mainly to the US experience. While much of the analysis applies to other countries and cultures, there are also significant differences. For example, old-fashioned patronage plays a much larger role in some European countries, making an exam-based system seem egalitarian by comparison. (Schmidt's analysis of exams becomes especially important in such circumstances.) The existence of powerful left-wing parties in many countries changes the situation for left-wing professionals, offering both opportunities and dangers that are not easily appreciated in the US. Cross-cultural assessments of themes covered in *Disciplined Minds* are needed. My fear is that there are few individuals with the inclination or opportunity to write them!

Where the book most obviously goes beyond usual critical analyses of professions is in the final part, "Resistance." Schmidt begins by drawing an analogy between professional training and ideological indoctrination in cults. He recognizes that students have many more opportunities to organize and resist than typical cult members. Nevertheless, he argues that "life in graduate or professional school *can* be very much like life in a cult - and that for students who aren't careful, it *will* be." (p. 218). He then looks at the characteristic features of totalistic organizations, such as big promises, control of the milieu, no questioning of authority, and shaming. He gives examples from professional training reflecting each of these features.

For example, Schmidt says that the leaders of totalistic organizations "would rather have total control of a group that does a poor job of fulfilling its all-important mission than be rank-and-file members of a democratic but more effective organization" (p. 227) and then quotes a sociology graduate student's experience of an intimidating faculty member.

How to survive? Well, how can captive soldiers survive what is commonly called

"brainwashing"? The US Army has a manual on resisting indoctrination when a prisoner of war. As Schmidt amusingly notes, this manual wasn't written for students, but "students in graduate or professional school should be able to put such resistance techniques to good use." (p. 239). A person who maintains an independent, nonconforming outlook in any institution, including a prisoner-of-war camp, is seen as deviant and threatening. The keys to resistance are knowing what you're up against, preparing to take action, working with others (organization!), resisting at all levels, and dealing with collaborators by cutting them off from key information and attempting to win them over. Schmidt gives a revealing account of his own difficulties in graduate school and how he survived as a radical.

Finally, Schmidt describes what is involved in being a radical professional: identifying primarily as a radical, having a critical perspective on the profession and institution, and doing things that make a difference, by connecting to opposition groups and working on the inside. For most teachers, then, doing things that make a difference would mean working in radical ways within a mainstream school.

Schmidt gives a list of 33 suggestions for radical professionals working in establishment institutions, such as helping on politically progressive projects during working hours, exposing the organization's flaws to outsiders, and taking collective action to maintain the dignity of individuals. These are all eminently practical suggestions. Schmidt does not present a grand plan to transform professions or society. Rather, his suggestions, like his analysis, are grounded in day-to-day realities. That is what makes *Disciplined Minds* a really subversive book, much more so than other books that may seem more radical in theoretical terms but lack a tight connection to practice.

How far to pursue any subversive step is a matter of judgment, and here Schmidt cannot provide much guidance since so much depends on an individual's circumstances, opportunities, understanding, skills and alternatives. It is usually safer to be an activist about distant issues than confront the local power structure. Is this a cop-out? Going too far means risking one's job and possibly the opportunity to pursue further change, but treading too softly is a prescription for gradually becoming a defender of the status quo. Schmidt encourages us to err on the side of action for change.

Schmidt worked for 19 years as an editor at *Physics Today*, doing work on *Disciplined Minds* on the side. In his provocative opening to the book, he states, "This book is stolen. Written in part on stolen time, that is." (p. 1). In other words, he spent part of his work time investigating and writing it. The book was too much for his employers to stomach: Schmidt was fired when it was published (Shea, 2000/01; <http://disciplined-minds.com>). However, his ordeal will be well worth it if others learn from his analysis.

While those who identify themselves as radical teachers will find much of *Disciplined Minds* unsurprising, there are still many insights worth extracting. Some key ones for me are the subtle ways that make professional training an intensely conservatizing process

and the point that professionals are more ideologically disciplined than nonprofessionals.

For a professional with progressive views, it can be hard to accept that the real ideological conformity is acceptance of standard ideas about professional behavior. An especially awkward role is that of academics who train professionals, including teachers. If selection and training is conservatizing, then academics are keys to this process. Schmidt recognizes and appreciates those individuals who offer support for nonconforming students. Mutual support is crucially important, and *Radical Teacher* plays an important role in this.

Is ideological disciplining of teachers getting more or less strict? Certainly there seems to be more of it, as higher degrees are expected for more teaching jobs and teachers seek extra qualifications as a means to get ahead. Mandatory continuing education might be seen as obligatory ideological discipline! Within universities, the trend towards managerialism and orientation to the market is imposing its own form of ideological discipline, with many faculty being quite willing to assign their curiosity to whichever projects offer the biggest bucks. On the job in schools, the pressures are ever greater, leaving less space for reflection and oppositional activity.

The path of the radical professional is not easy, but at least Schmidt makes it seem like a lot of fun. Revealing the processes of subordination is for him a playful expose. He would be delighted for others to join with him saying "The exam has no clothes!" His most important message, though, concerns resistance:

"The system of education and employment works to redefine who you are in the deepest sense, pushing you away from developing and acting upon your own vision and guiding ideas. Hence, if you want to stand for something and avoid vanishing as an independent force in society, you have no choice but to resist." (p. 280).

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*Disciplined Minds: A Critical Look at Salaried Professionals
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(Rowman & Littlefield, 2000) by Jeff Schmidt

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A Review of Jeff Schmidt's *Disciplined Minds: A Critical Look at Salaried Professionals and the Soul- Battering System That Shapes Their Lives*

Review by Marc J. Stern

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Department of History at Bentley College, in Waltham,
Massachusetts.*

From 1975 to 1977 I lived in a graduate student group house that included two physicists. Both were hard working and loved their chosen craft. One, the more theoretical, idiosyncratic, and, I believe, the smarter and more creative of the two, washed out of his program after two years with a terminal master's. He just did not fit in. He took his rejection hard, but the last I heard, he was a computer professional and manager. He could not even stand to read physics studies, however, as this material just brought up too many painful memories. The other, better connected in the labs and more sociable, finished his Ph.D. working on laser technology. He was committed to the peaceful uses of lasers. He swore he'd never do military work. He went on to build and test lasers for the military. He is a professional scientist.

In *Disciplined Minds*, Jeff Schmidt, a graduate physicist (Ph.D., UC-Irvine) and an editor at *Physics Today*, attacks in scathing and confrontational language what he believes to be the mind- and soul-crushing world of professional work and training. He gives no quarter in this polemical screed. He denounces the indoctrination of apprentices in the "mysteries" of the professions (broadly defined to include almost all employed brain workers whose work

demands advanced degrees from accredited institutions) as crafting people skilled in technical arts without critical thinking, social conscience, or the will to resist. Indeed, one chapter literally relies on an army training manual used to advise troops on how to resist brainwashing while a prisoner of war. And war it is to him; it is “them versus us.”

Schmidt assesses professionals’ work lives, concluding that “the hidden root of much career dissatisfaction is the professional’s lack of control over the political component of his or her creative work” (p. 2). Starting out hoping “to make a difference,” most professionals become tools of an oppressive and all-consuming, hierarchical, gendered, and racist system whose goal is global domination for the American military-industrial-university complex. Such people would be dangerous to hierarchies if they thought critically and challenged both their own subordination and the oppression of others. To remain in a position where their work is self-directed (if not self-selected), however, they must become conservative and accept the system’s goals as their own.

Schmidt begins by examining the professionalized strata in our society. Rooted in corporate capitalism founded on a heightened division of labor, he takes this to mean those service workers (in medicine, administration, law, engineering, the arts, and education, to name but a few fields) graced with appropriate degrees by credentialing institutions (universities). He also includes “certain low-level executives ... people who make up the corps of salaried MBAs.” Although smugly self-satisfied in their “liberalism” about distant matters, most professionals are, he argues, conservative about workplace issues that matter to the vast majority of working people. They validate social-institutional hierarchies and legitimate their own place in them at the expense of others. They are, of necessity, reliable managers who must accept the ideological norms of their employers to function as semi-autonomous, self-directing workers. They hold no monopoly on knowledge -- many nonprofessionals know as much about their subjects -- but can act based on their own judgment to promote their employer’s and/or establishment interests. Their work cannot be completely routinized: they are charged with making ideological decisions of a sort at odds with the mechanical range allowed nonprofessionals. They are thus supposedly constrained by law but are, in fact, more heavily controlled by hierarchically mandated, system-wide ideological codes. True creativity and critical thinking are replaced by “playpen” variants. The

professions differ as to their basic “ways of thinking,” but at heart, all buttress the ideology of hierarchy and subordination inherent in modern capitalist life. Their minds have truly become disciplined to work within and sustain “the box.”

A physicist, Schmidt uses scientists and scientific training as his primary case. True freedom of inquiry, the supposed essence of the sciences, is, he suggests, sorely prescribed by the centrality of government and corporate funding. Scientists will turn their work toward the money the way a plant bends to reach sunlight, naturally and without thinking. Industry and government scientists, meanwhile, try to satisfy their own sense of independence by choosing from among the projects their employers suggest. Research work is bounded early on through training in particular projects sponsored by the military or other governmental agencies or corporations acting as surrogates. Enmeshment in the work of physics, regardless of the funding, floats a cloak of scientific virtue over projects so that many researchers see themselves as pure scientists, not as agents of the military-industrial complex. Scientists may disdain empire-building “grantsmen” who cater to federal budgets as servants to a master, but they bring in dollars and build programs that drive the engine of scientific reproduction. To maintain one’s career and job, one must adapt to the market’s demands, not simply pursue what interests you. More importantly, one must avoid following agendas contrary to the corporatist state’s interests. As Schmidt demonstrates, specialization in R&D fits nicely into the hierarchical systems that keep knowledge fragmented among its developers but integrated at the core. Of course, “subprofessions,” such as nursing, teaching, etc., have even less freedom to define their work and focus.

Higher income, status, improved working conditions, and the capacity to choose more aspects of one’s work motivate people to enter into professional work. But corporate or institutional dominance means that professionals must serve those interests, not really direct their own work lives. Promotion within professional ranks often hinges on such work; it is not guaranteed. Creativity thus yields to perceived necessity.

Still, competition for admittance to professional schools is keen, and *Disciplined Minds* comes most alive when describing the education system. Those denied entrance often either reproach themselves for their personal failure or assign blame to those few

who gain admittance through affirmative action programs for their personal failure. The system wins either way. Professional educators cloaked in the mantle of objectivity stand as gatekeepers, enforcing their values on an applicant pool, and weeding out those viewed as deficient by some abstract standard. Women and minorities are especially prone to rejection in this process, and Schmidt supports affirmative action that creates special slots for historically disadvantaged populations. In any event, the process is political from the get-go, with outlook and attitude the primary variables. Those from working-class backgrounds denied promotions to the middle-class professions often become the technicians who implement their "betters'" dictates. Schmidt seeks to shatter all such divisions-of-labor and hierarchy, and is so committed to this approach as to applaud the Chinese Cultural Revolution's practice of sending professionals to the countryside for years of hard labor. His defense of this policy, however, strikes me as weak, historically incomplete, and breathtakingly naive.

After admission, professional training "narrows the political spectrum," as students become less idealistic and more exhausted from their work. Those who attempt to preserve a broad view of their field and remain connected to the world are cast out by professors who see that they do not have "the right stuff" to be members of the club. They lack the monomaniacal fervor, the glad-handing obsequiousness, or both, required for admittance. Socio-intellectual goals are replaced by selfish commitments to compensation and rising in one's field. Work to prepare for exams and complete assignments for credentialing come to dominate life. Qualifying exams combine both objective and subjective grading and allow gatekeepers to admit or exclude as they wish with relative impunity, as they did with my housemate long ago. Tricks -- not the study of the discipline -- dominate exam preparation. This preparatory process transforms the student from a truth seeker into an alienated knowledge worker, serving as cheap labor in a professor's research project. They become professionals seeking institutional advancement not knowledge. Subordinate and disciplined minds, they are ready for professional work.

Overall, Schmidt views this training as something akin to entering a cult. The profession: promises positive changes in your life, seeks to control your environment completely, demands obedience to the views of leaders/professors, uses guilt and shaming to promote activity, promotes total vulnerability on the part of its

members, has its own scientific dogma and worldview, takes away self-confidence, and claims to be the only path to salvation. To help the reader combat this indoctrination, Schmidt relies on an army manual on resisting brainwashing. He argues for creating alliances with other oppressed students and colleagues and proposes ways to sustain integrity and self-esteem in the face of demoralizing professionalization. In the end, however, he concludes that the only way to resist this process is to become truly radicalized. To operationalize this goal, he offers a handy list of 33 things you can do at school or on the job to keep your “self” intact and pursue the radical goals you know are necessary to create a democratic and human-centered society. The only way to survive as a critical thinker, he suggests, is to set yourself in perpetual opposition to the system, the establishment, your employer, and the very notion of professionalism.

There is much that is thought provoking and illuminating in *Disciplined Minds*, but there are some serious problems with this study. Indeed, it’s difficult to remain focused on them, because the piece is frequently smug in its tone and scattered in its organization. Leaving aside his limited presentation of nonprofessional work, I will look at his treatment of professionalization.

Some of the problems with *Disciplined Minds* seem to flow from the fact that it was not written by a professional analyst of professions. It is intended for potential professional students, professionals, political activists, and interested “lay” readers, but the book ignores most of the vast body of literature that already exists beyond the synopses presented in the mass media and a few supportive studies. It is not clear whether Schmidt is unfamiliar with this literature or whether he chooses to ignore it as irrelevant and tainted. In addition, this is an entirely descriptive study, providing little in the way of statistical data regarding the phenomena he describes. Descriptive research is fine, and I have seen many of the things he chronicles, but I have also seen the opposite. I have witnessed situations where professors exploited, repressed, and shamed their graduate students, and others where they were incredibly helpful and supportive, open to views quite at odds with their own, where they gave their students almost unlimited freedom to write and think. And unlike the sciences where most of the work is done in a professor’s lab, much research in the humanities is largely independent and unsupervised for months at a time. We need to know which is the more common

experience, and hard data on these matters would help.

Some of these problems may also arise from his use of physics as the archetypal profession. In contrast to the mandatory full-time graduate training he denounces in the natural sciences, many people pursue professional degree work part-time while working and holding down other professional or nonprofessional positions. These folks often enter cognizant of the compromises they are making and desirous of increased compensation and status they hope their labors will bring. That is why they are there. And unlike the natural sciences that have maintained their illusion of independence while becoming wholly owned subsidiaries of the corporate-military state, many of the disciplines and professions he lumps together, including my own, history, have experienced their humbling fall from grace in a painfully self-conscious manner. These "fallen" professionals still attempt to pursue intellectual freedom in research and presentation, but they have also accepted their status as servants of some institution: higher education, the corporation, etc. Members of these professions seem to be conscious of that devil's bargain while attempting to retain core personal and intellectual values. They neither trumpet nor deny the compromises they have had to make, and most members of "the club" do not delude themselves about their virtue and autonomy. Finally, but hardly fully, his critique of the totalizing institution is itself rooted in a totalizing ideology. Only those who accept his vision, Schmidt seems to say, can become or remain free, and he presumes to use himself as a model, an example for the rest of us to follow, while publicly settling scores with his graduate school professors.

Still, there is much to *recommend* aspects of Schmidt's case; it cannot simply be dismissed out of hand and should not be ignored. He rightly rejects the notion of hierarchical virtue in mental as opposed to creative physical work, indeed he demystifies the privileging of theory over experimental physics as he critiques the privileging of professional versus nonprofessional work. His model also resonates with what many of us undoubtedly experienced in graduate or professional schools. Each of us saw very talented people unjustly "purged" from graduate school or work for failure to conform. Schmidt's failure to follow them after their expulsion from the garden -- and most, I suspect, wind up in other professions -- and his assumption about their career trajectories is unfortunate, but it does not change the reality of organizing a professional craft from the inside. Most professionals

have also had moments when we perform as desired by institutions even though we disagree with their programs, processes, or goals. We have been conditioned to perform as professionals, and professional life within institutions is largely conservative. The work is not always rewarding or creative. At all but the highest reaches of research and creative graduate teaching, professional work is, after all, employment as well as a profession. In the end, as he suggests, many professionals have become servants -- disciplined minds -- of the masters who forged their chains.

book REVIEWS

Review of Jeff Schmidt's *Disciplined Minds*

Brian Martin

As an academic laborer, I design subjects, set assignments, mark essays and supervise theses. This seems natural enough. Could it actually be a deeply ideological process? Worse yet, am I unknowingly helping produce graduates who are more conformist than I wish or imagine?

Jeff Schmidt argues that training professionals is a process of fostering political and intellectual subordination. On the surface, this is a startling claim, since the often-stated aim of educators is to promote independent thinking. Critics have long argued that schooling is a method of preparing children for life as workers within the class structure (Bowles and Gintis, 1976), but have not often pursued the same analysis at the level of higher education.

There are two key ideological processes in professional education, according to Schmidt. One is favoring students who pick up the point of view of their superiors, behavior Schmidt calls "ideological discipline." The other is favoring students who direct their curiosity as requested by others, a trait Schmidt delightfully dubs "assignable curiosity." For example, the teacher sets the class an assignment, say on symbolism in a novel. It doesn't matter so much whether the novel is by Austen or Gordimer. The question is whether the students will do as they are told. "Good" students will undertake the assigned task conscientiously, perhaps even going beyond what the teacher expected -- but in a way that pleases the teacher. "Difficult" students may do something different, refusing to accept the task as given. No prizes for guessing which students get encouragement and rewards.

The same dynamic applies when it comes to qualifying

examinations, well known to anyone undertaking a PhD. To be sure of passing, students knuckle down to learn what is expected, for example by studying past exam papers and reading all the assigned books. Any students who instead follow their own interests by only studying things that intrigue them personally are risking their professional future. A few of such independently minded students get through the exams, but most of those who pass have played it safe. They have learned to acquiesce intellectually. They are ready for life as a professional who will not step outside the bounds set by those with power. Schmidt says that "professional education and employment push people to accept a role in which they do not make a significant difference, a politically subordinate role." (p. 2).

In developing his critique, Schmidt adopts a practical, reader-friendly approach. For example, he analyzes the PhD qualifying exam as a social framework endorsing the status quo with detailed illustrations from his own field, physics, describing the need to memorize tricks that are useful only on exam problems, to restrict attention to "problem fragments" and give priority to theory, all of which prepare a student to accept alienating work in a hierarchical system. He also gives examples from other fields and includes fascinating letters he's received from graduate students and professionals who have developed some understanding of the ideological features of professional education. He tells about professionals with fake credentials who are quite able to survive so long as they have the right attitudes, illustrating the primacy of ideological discipline in professionals' work. He reveals how scientists describe their own work in ways that conceal its practical relevance, thus preserving for themselves the illusion that they, rather than the funding agency, are setting the agenda.

Nearly half of *Disciplined Minds* is devoted to the selection of professionals. This material on the political dimensions to graduate school admission, construction of exams and "cooling out" of unsuccessful aspirants will be of special interest to readers of *Workplace*. But Schmidt's critique is much broader than this, encompassing the work and role of all professionals, from police to doctors as well as academics, as indicated by the subtitle to the book, *A Critical Look at Salaried Professionals and the Soul-Battering System that*

Shapes Their Lives. His central claim is that professionals are more timid, intellectually and politically, than nonprofessionals. Professionals may have progressive attitudes about "distant" issues such as poverty or foreign policy but, Schmidt argues, when it comes to issues in and close to their own work, most of them behave "professionally," which means cautiously and conservatively. Most scientists are quite happy to undertake projects for whoever is willing to pay for the research, whether universities, corporations or government. Most Soviet scientists just got on with the job without questioning government repression, and likewise most scientists in Nazi Germany made no protest. The concept of assignable curiosity thus has wide applicability.

Ironically, the key to the political dimensions of professionals' work is their belief that they are not and must not be political -- an ideology of not being ideological. "As a professional, the teacher is 'objective' when presenting the school curriculum: She doesn't 'take sides,' or 'get political.' However, the ideology of the status quo is built into the curriculum. The professional's objectivity, then, boils down to not challenging this built-in ideology." (p. 32).

Schmidt shows great understanding of and empathy with the psychological anguish of many professionals, especially their discomfort during years of graduate school as they jettison their ideals in order to enter their career of choice. "Although the professional has sidelined his original goals, he usually retains some memory of them. Any such memory inevitably points to the compromises he has made and therefore can be an unrecognized source of unease in the professional's life." (p. 121). Schmidt says that professionals seek money and status as compensations for subordinating their ideals.

Several things may have helped Schmidt to undertake a critique of this sort. He has personal experience of going through the system but was able to get his PhD without fully conforming to usual expectations. Aside from some years teaching secondary school, he has mainly worked as an editor for *Physics Today* magazine, thus giving some separation from day-to-day ideological work with students. Finally, he has remained an activist during his professional

His central claim is that professionals are more timid, intellectually and politically, than nonprofessionals. Professionals may have progressive attitudes about "distant" issues such as poverty or foreign policy but, Schmidt argues, when it comes to issues in and close to their own work, most of them behave "professionally," which means cautiously and conservatively.

life. This shines through clearly in the final chapters in the book dealing with resistance.

Schmidt looks at what's known about cults and indoctrination, drawing lessons for graduate students and working professionals. Understanding the ways that cults work -- for example by using big promises, controlling the environment, having unquestioned authority and guilt tripping -- provides insight into how graduate school operates, and therefore how to resist. Schmidt does not argue that professional training is the same as indoctrination in a cult, only that "life in graduate or professional school can be very much like life in a cult -- and that for students who aren't careful, it will be." (p. 218). For each feature of cults, he provides illustrations from graduate school.

Schmidt also draws on the US Army's manual that tells troops how, if they become prisoners of war, to resist indoctrination, often called brainwashing. Key elements are knowing what you're up against, preparing to take action, organizing with others, resisting subordination and dealing with collaborators by cutting off information and trying to win them over. These ideas apply quite readily to graduate students and salaried professionals, who of course are in a much stronger position to resist, though perceiving the need to resist may not be so obvious. The book concludes with a list of 33 suggestions for radical professionals working in mainstream organizations, such as encouraging coworkers to read radical publications, organizing a union, giving activists inside information, breaking down hierarchy within your field and seeking to break down the division of labor between professionals and nonprofessionals.

Disciplined Minds is primarily an analysis of professionals in the US. While much of the book is applicable elsewhere, there is also a need for radical professionals familiar with other cultures and types of institutions to undertake parallel analyses.

Readers familiar with scholarly work in the social sciences will find a number of original features in *Disciplined Minds*. Rather than survey the literature on the sociology of professions, the sociology of education and other relevant fields, Schmidt presents his own framework and pursues his

own intellectual agenda, an approach more characteristic of those trained outside the social sciences. If you are expecting assessments of such important and relevant works as Randall Collins' *The Credential Society* or Alvin Gouldner's *The Future of Intellectuals and the Rise of the New Class*, you will be disappointed, for although Schmidt knows of such works, he decided not to discuss or even cite them because they are not necessary to his argument. (He does cite plenty of sources directly relevant to his case.) On the other hand, Schmidt has pursued some puzzles -- such as the role of cooling-out work and why theory has so much more status than experimental or applied work -- that are seldom addressed elsewhere.

This is in keeping with Schmidt's own goal, which is far less to make a purely intellectual contribution than to foster action. Over the years I've read many books about professionals and intellectuals, but seldom is there much attention to action. *Disciplined Minds* stands out as by far the most practical treatment available, being both accessible and encouraging. For many it will be confronting to read, in that it challenges illusions about professional work, but at the same time it has a devilish undercurrent. Schmidt obviously believes it can be fun to take on the system.

For many, the challenge is to make a difference without jeopardizing one's career. Schmidt would have us give priority to making a difference. By following his own advice he ended up paying a severe penalty since, after working for 19 years as an editor at *Physics Today*, he was fired when *Disciplined Minds* was published. The book was simply too provocative for his employers (Shea, 2000/01; <http://www.disciplined-minds.com>). However, as a result of lots of organizing, the dismissal has generated far more attention for Schmidt and the book than would have otherwise been the case. There is a lesson for anyone who wants to make a difference. Choose your actions carefully, with plenty of preparation, and they will either be effective directly or, through resistance, generate greater support. Of course, if your mind had been properly disciplined, you wouldn't think of such a thing!

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*Disciplined Minds: A Critical Look at Salaried Professionals
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(Rowman & Littlefield, 2000) by Jeff Schmidt

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How the ruling class exercises ideological control

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Marx and Engels observed long ago in *The German Ideology* that the ruling ideas of any epoch are those of the ruling class. This ideological control, exercised for centuries over the working class through control of the media, government, and other institutions, has never been absolute. It can be argued, however, that today its effectiveness is greater than ever, in large part because the monopolization of the media is much greater than ever. To counter this, there has always been (as Marx showed) and still is a struggle by the working class in behalf of its own interests. A major problem today, however, is the lack of unity in this struggle, a lack fostered and nurtured very effectively by the ruling class.

A major ruling-class weapon in keeping up this division is the separation between workers of the mind and workers of the hand. Although this distinction is never hard and fast (no work is purely of the mind or purely by the hand), one way to characterize it is by the distinction between “professional” and “nonprofessional” workers. The ruling class relies on its professional workers for creative ideological work; this group educates and works to shape the opinions of a much larger sector of the working class.

This group of “professionals” is not at all negligible in size. In the United States, for example, it numbers some twenty-one million and is the fastest growing sector of the working class.¹ One of the various ways to define what is meant by the term “professional” is by level of educational attainment, so that one can include doctors, educators, engineers, scientists, lawyers, writers -- in short, anyone with a professional degree. The data on levels of educational attainment in the United States parallel the occupational data.²

It is inevitable in this age of ever-increasing monopolization that many professionals themselves become proletarianized. Of every nine professionals today, only one is a free practitioner; the rest are salaried employees (Schmidt 2000, page 18). So the ideological control of the ruling class over the ranks of the professionals, while always of great importance to the ruling class, is of even more importance today.

A new book by Jeff Schmidt, *Disciplined Minds*, attempts a detailed look at just how this is accomplished. The usual means of ruling-class influence on the opinions of professionals and nonprofessionals alike is through control of the government and media. Beyond this, the ruling class has ideological control over the workplace and the extensive training of professionals; this control is the primary focus of the book (although this emphasis is not explicitly stated). Schmidt describes the professional programs and graduate schools of the universities as a system of “turning politically independent thinkers into politically subordinate clones” (4).

If one considers the beginning of a student’s road to becoming a professional, the act of gaining admission to college or university, then it is clear that admission criteria are not neutral. Such criteria necessarily favor either the interests of the ruling class or those of the multiracial, male/female working class. Schmidt does discuss the question of whose interests are served by selection criteria (105-112). Here, he discusses affirmative-action programs in a positive manner, arguing that they are necessary to overcome bias against working-class, female, and minority applicants.

He is on less sound ground when he tackles the question of standardized tests, such as the ACT and SAT, used in the selection process. His position is that use of these tests should be abolished *because* they are a useful predictor of success in college. Colleges themselves, he argues, are biased, favoring with success persons having “white, middle-class, male-gendered attitudes and values” (182). Many criticisms of the SAT and ACT tests can be mounted, but Schmidt’s criticism is hardly likely to advance the struggle for a more democratic selection process.

Further weeding-out and changing of ideological thinking occur as students progress through graduate school. This is done, according to Schmidt, primarily at the level of qualifying examinations. He uses as an example the qualifying exam in physics (Schmidt is himself a product of that process, having obtained a Ph.D. in physics from the University of California). Physics is a good

example because it is a field supposedly free of political bias.

In the typical physics qualifying examination, which he studies in considerable detail, there is an “emphasis on quick recall, memorized tricks, work on problem fragments, work under time pressure, endurance, quantitative results, comfort with confinement to details, and comfort with a particular social framework. The exam de-emphasizes physical insight, qualitative discussion, exploration, curiosity, creativity, history, philosophy, and so on. This forces the student who wants to be passed to adopt an industrial view of the subject, to view it as an instrument of production, to use it in an alienated way” (136). This helps ensure that “students who are willing and able to conform to the faculty’s attitudes and values, which usually favor the status quo over social change, are less likely than others to get cooled out of professional training” (201).

Later, in the workplace (whether it be industry, government, or academe), the so-indoctrinated professional will continue his or her subordination by adopting “professional” behavior, namely, “the notion that experts should confine themselves to their ‘legitimate professional concerns’ and not ‘politicize’ their work” (204).³ In conflicts with employers, the professional is more apt to place the blame for these problems on management incompetence rather than on any fundamental conflict of interest. This attitude renders the professional employee weak as a force for his or her own defense, and impotent as a force for change in society (209).

Another aim of the book is to establish clearly the political nature of professional work. For instance, chapter 4 documents well how military and industrial concerns dominate “pure” or “basic” research in the United States -- and by extension in the whole world.

Schmidt concludes with a section entitled “Resistance,” in which he offers those beginning a professional career advice on how to avoid the brainwashing of the professional life. In a light-hearted style, Schmidt uses a U.S. Army manual advising captured American soldiers on how to avoid successful brainwashing by the “enemy,” adapting it to give analogous advice to U.S. graduate students.

Overall, the book is a welcome addition to the libraries of Marxists and others seeking better understanding of the specifics of the ways the ruling class exercises ideological control. By knowing how the capitalist class divides nonprofessionals from

professional members of the working class, one is better equipped to combat these divisions, and thus help to unite the whole working class.

Nevertheless, it is necessary to point out several flaws in the book, some of which show the need for a Marxist treatment of the subject.

1. Schmidt's approach is fundamentally anarchist, as illustrated when he remarks that "hierarchical organizations are fundamentally flawed" (271). He constantly emphasizes the *direction* and *disciplining* of scientists and professionals generally; this is the major focus of the book, as the title implies. He is concerned far less with the *content* of this direction, or whose interests it serves; his understanding lacks class analysis. With all the mistakes it made that paved the way for the downfall of socialism in the Soviet Union, that country was still a state controlled by the working class. When Schmidt equates directed research in the Soviet Union with directed research in the United States (both, he feels, being equally reprehensible), he takes a classless approach (211).

2. Speaking as a physicist who has gone through training similar to Schmidt's, I must say that much of his criticism of this training is unconvincing. It does not seem to concern him that this same system of training (quite similar in the former Soviet Union and today's United States) has led in the past three-quarters of a century to space travel, and incredible advances in the theory of elementary particles, condensed-matter physics, astrophysics, etc. Nowhere in his book can one find any mention or appreciation of the accomplishments of modern physics (or, for that matter, of medicine, astronomy, engineering, biology. . . the list goes on and on). This is, of course, not to say that the system is perfect, nor that some of his points are not well taken. His analysis remains incomplete, however.

3. Although in one or two places Schmidt (rather casually) expresses support for unions, it is remarkable that in a book devoted to the ideology of professionals, not a word is said about the phenomenal trend toward unionization of the professional segment of the working class. Just a few indicators will show this. Since 1977, when the Department of Professional Employees was created in the AFL-CIO, union representation has fallen overall, but it has grown to 22 percent among the professional occupations (AFL-CIO Executive Council Report, 1999). The AMA's June 1999 decision to openly embrace collective bargaining and a union-style organization for doctors was of historic importance.

Another historic event was the forty-day strike of 20,000 Boeing Corporation engineers, which ended in victory on 20 March 2000. Of course, the move toward unionization is in itself not an act of class consciousness, but it is a first step. In a typically leftist demonstration of desire to bypass steps on the road to revolution, Schmidt faults professionals for not seeing their conflicts with employers as part of a fundamental conflict between capital and labor (209).

Disciplined Minds is a freewheeling, thought-provoking examination of the way ideological control is exercised over an increasingly important section of the working class -- the professionals. It is too bad that it falls short of fulfilling that task with complete adequacy.

Notes

1. According to the website of the Bureau of Labor Statistics (July 2000, <www.bls.gov/webapps/legacy/cpsatab4.htm>), the broad category "managerial and professional specialties" increased from 22.6 percent of the work force in 1982 to 30.1 percent in 2000. All other occupational categories showed a decreasing percentage in that same period.

2. The percent of the population as a whole who have completed four years of college or more rose from 17.7 percent in 1982 to 24.3 percent in 1998, according to the U.S. Bureau of the Census (<www.census.gov/population/socdemo/education/tablea-01.txt>).

3. It is interesting to recall an incident in my own experience which shows how this "professional" attitude can sometimes be used to protect an iconoclast in academe. As a physics professor, I once offered a seminar on the Marxist philosophy of physics. Conservatives in the physics department mounted an attack on my right to teach such a seminar, trying to enlist the support of the university's philosophy department to criticize my credentials to teach such a seminar. The philosophers' reply was they could not vouchsafe an opinion on the matter inasmuch as they had no one in the department who was an expert in Marxist philosophy!

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Disciplined Minds

Reviewed by Charles D. Hayes

Jeff Schmidt has a Ph.D. in physics from the University of California and was (until he was fired over publication of this book) an editor at Physics Today. Drawing from his experience in graduate school and a driving curiosity about the very nature of higher education in America, Schmidt has written a soul-battering book. About the typical graduate school experience he writes, "A system that turns potentially independent thinkers into politically subordinate clones is as bad for society as it is for the stunted individuals. It bolsters the power of the corporations and other hierarchical organizations, undermining democracy.... It does this by producing people who are useful to hierarchies and only to hierarchies: uncritical employees ready and able to extend the reach of their employers will. At the same time, a system in which individuals do not make a significant difference at their point of deepest involvement in society—that is, at work—undermines efforts to build a culture of real democracy."

It gets worse. Schmidt argues that, contrary to popular belief, college graduates prove to be more easily manipulated than their less-educated contemporaries. He cites studies showing that during the Korean and Vietnam wars the better educated citizens were actually more "hawkish" than the general population and that this was the result of the mechanical thinking inherent in higher education.

Schmidt argues that even the stereotype of the liberal professor (a type who constitute only about five percent of full-time college faculty) is at odds with how these professors actually behave on the job—they are apt to be far more conservative and authoritarian in their workplace demeanor than their ideology would imply. "[W]hile professionals are tolerant of distant social criticism," he writes, "they have little tolerance for anyone who tries to provoke a debate about the politics that guide their own work."

Schmidt observes that, as work becomes more and more ideological, those admitted into professional work are themselves more and more selected on their apparent willingness to accept a strict adherence “to an assigned point of view.” Thus, he argues, it should not be surprising that one of the key characteristics of professional employees is ideological obedience and intellectual timidity. When you consider that the number of people regarded as professionals has gone from 5 percent of the population since the 1920s to a recent estimate of 27 percent, this is cause for alarm.

Schmidt says professionals go further than just agreeing to carry out their employers’ instructions: “They also sell their ideological labor power, their ability to extend those instructions to new situations. It is this sale that distinguishes them from nonprofessionals, who sell only their ordinary labor. Those in charge can trust professionals to make some decisions that must be made ideologically; nonprofessionals are trusted to make only decisions that can be made mechanically.”

Such attitudes appear in the workplace as matters of turf. When a “nonprofessional” but dynamic employee, for example, chooses to make a decision that seems like the right thing to do but is ideologically out of sync with the employer’s policy, the decision will be reversed with a vengeance whether it was the right thing to do or not. Moreover, employees who have made such decisions will be told in no uncertain terms that they are not “professionals” and are warned not to try to act that way.

As Schmidt sees it, professionals rarely have more real authority than nonprofessionals; they merely have an operational grasp of the ideology particular to their profession. He says professionals can’t even be “properly called critical thinkers,” as they inherently avoid risk. Perhaps it is more appropriate, he suggests, to call them “ideologically disciplined thinkers.” Taking a bold stance, Schmidt dares to assert that in most disciplines the actual technical skills required to do the job can be picked up quickly while working (even in fields like medicine) but what the years of mind-numbing classroom attendance accomplish is to mold ideologically disciplined minds.

Okay, are you as depressed as I am at this point? This is indeed a dismal view of higher education. It’s even worse when you consider the stakes involved in lifetime employment and the fault lines of stress that exist between professionals and nonprofessionals. In a chapter titled “Resisting Indoctrination,” Schmidt writes, “One

might not expect organizations as different as the Unification Church and the U.S. Marine Corps to have much in common, but rank-and-file Moonies and Marines are alike in one important way: they are not distracted by ideas of their own.” Well, I don’t know anything about Moonies, but I spent four years in the Marines. Schmidt will get no argument from me on this statement. One of his main points about surviving graduate school is analogous to the experience of a POW: survival may not be as important a question as what kind of a person you will be when you get out.

Professional training, according to Schmidt, takes a great toll on individuals while it simultaneously lessens sensitivity to elitism, makes people risk averse, and renders them overly compliant. In essence, Schmidt believes that what really matters in a global sense is not who does the work that changes society for the better but “how much of it actually gets done.” No argument from me on this issue, either. If you have a stake in higher education or consider yourself a “professional” you should read Disciplined Minds.

A Mind of One's Own

The Chains of "Professional" Employment

By CHRIS GARLOCK

"This book is stolen." Jeff Schmidt's provocative opening to his book cost him his job: the ink was barely dry on the pages when Schmidt's employer called him in and summarily dismissed him, barely giving him enough time to pack his personal effects. Schmidt's offense was his forthright admission that *Disciplined Minds* had been written in part on time "stolen" from his employer. "I felt I had no choice but to do it that way," Schmidt writes in his introduction. "Like millions of others who work for a living, I was giving most of my prime time to my employer.... No one was about to hire me to pursue my own vision, especially given my irreverent attitude toward employers."

So Schmidt started spending office time writing *Disciplined Minds*, a book, appropriately, about "professionals, their role in society and the hidden battle over personal identity that rages in professional education and employment." The great strength -- and weakness -- of *Disciplined Minds* is that it reads like a book written largely on the job: an uncomfortable see-sawing between constant glancing-over-the-shoulder nervousness and a powerful undercurrent of anger and bravado. Like the burned-out co-worker who can't seem to help telling you way more than you ever wanted to know about the latest injustice from the Head Office, Schmidt has gotten hold of a very real problem, and refuses to turn loose until he's laid it out in excruciating detail. Judging by the reaction so far (see sidebar), it looks like Schmidt has hit the bull's-eye. But there's also some fairly convincing evidence out there to suggest that larger social forces may well be stirring.

Stockbrokers are doing it. So are lawyers, rocket scientists, and doctors. Joining unions, that is. Maybe not in huge numbers yet, but then the battles in the streets of Flint began years earlier in small shops, as workers began organizing to regain control of their lives on the job. This looming struggle between workers and bosses -- which will play out this time in carpeted offices amid the silent hum of air-conditioning -- differs only in degree from the bloody strikes, lock-outs, and sit-ins of the last great battles over the American workplace back in the Thirties.

At the same time that blue-collar workers are once more taking

to the nation's streets -- janitors have blocked traffic in major cities across the nation this year in their increasingly successful quest for justice -- many of America's 21 million professionals are beginning to reject the trade-off of a comfortable salary and a cushy desk job for mind-numbing meaningless work. What's going on? Unions have been a shrinking percentage of the workforce for decades now, victims of their own success, as union members ascended to the American middle class and all the middle-management ethos that implies.

Problem is, the house, the car, and the summer vacation isn't enough any more. Never was, in fact. The battles in Flint (and elsewhere, of course; Flint serves here as a useful flashpoint and metaphor) were much more about workplace control issues -- line speed and the right to organize, for example -- as they were about wages and hours. "The hidden root of much career dissatisfaction is the professional's lack of control over the 'political' component of his or her creative work," argues Schmidt. Today's professionals, far from being independent, creative "partners," turn out to be just as much cogs in the machine as the blue-collar guy tightening bolts eight soul-numbing hours a day on the assembly line.

To update the metaphor, perhaps a more accurate description of the professional is as micro-processor, buried deep and invisibly in the computer innards, forever relaying instructions. "Professionals sell to their employers more than their ordinary labor power, their ability to carry out instructions," writes Schmidt. "They also sell their ideological labor power, their ability to extend those instructions to new situations.... Professionals implement their employers' attitudes as well as their employers' lists of instructions." In other words, unlike assembly-line workers, who only sell their blood and sweat eight hours a day, today's professionals rent out our brains, twenty-four/seven. We have become, not our own bosses -- in the beloved entrepreneurial fantasy -- but The Boss Him (or rarely, Her) self.

A paradox, then. Professionals are by definition independent and self-directed. (Else how could they be capable of carrying out high-level tasks such as an employer's attitudes?) Yet to be useful to employers, they must be molded as firmly as the time-and-motion directives for assembly-line workers instruct.

The answer lies in the selection, training, and accreditation of professionals. "The intellectual boot camp known as graduate or professional school, with its cold-blooded expulsions and creeping indoctrination, systematically grinds down the student's spirit and ultimately produces obedient thinkers -- highly educated employees who do their assigned work," writes Schmidt, "without questioning its goals." "Professional

education is a battle for the very identity of the individual, as is professional employment," he warns, in language that workers of any age of change and discontent would recognize.

Last year, as I was passing out rally leaflets at a downtown Washington Metro stop on a weekday morning, I was stunned at the steady stream of resigned faces pouring up out of the subway. Expressions of exhaustion and frustration that would have been perfectly understandable after a hard day at the office, were simply astonishing to see first thing in the morning. "An unsatisfying work life is much more than a 40-hour-per-week problem," Schmidt notes, "because of its profound effect on your morale while you are off the job. You may be pained to think of it as such, but your job is probably the biggest project of your life.... Thus, for all practical purposes, your life's work is at stake."

Workers of the world, unite! You have nothing to lose but your minds.

Chris Garlock steals time professionally in Washington, D.C.

[Sidebar]

Stealing Time

A Theory of Relativity

On June 26, 2000, the Maryland Department of Labor issued a ruling rejecting *Physics Today's* claim that author Jeff Schmidt engaged in misconduct on the job by writing *Disciplined Minds* while working at the magazine. The central question was why *Physics Today* fired Schmidt: the company claimed it was because of his "misconduct," while Schmidt says that "management didn't like the radical content of the book and was looking for an excuse to get rid of me because of my workplace activism." After an investigation, Department of Labor examiner Tasha Owens ruled that Schmidt's work on the book didn't even rise to the level of "simple misconduct," let alone the more serious "gross misconduct" or "aggravated misconduct," and awarded him full benefits, retroactive to June 4, 2000.

A key factor in the decision seems to have been that *Physics Today* never bothered asking Schmidt how much office time he spent writing the book, even though they ostensibly fired him for working on a personal project on company time. "The ruling means that *Physics Today* fired me for a reason other

than 'misconduct in connection with the work,'" Schmidt said. "Who will see that reason as anything other than political misconduct?"

Plenty of people, apparently, and not just bosses. Responding to reports on the Schmidt firing in the National Writers Union D.C. local's weekly e-zine (which I edit), writer A. Warren wrote, "In every office I've ever worked in, it would be considered highly unprofessional to do personal work on office time, even if one's assignments were completed. It wouldn't even be tolerated in support staff, let alone writers or other professionals.

"Would Schmidt feel justified in leaving the office for the day whenever he finished his current assignments? I think not. But that's in effect what he did, whenever he worked on his book during office hours. While on company time, he had a moral (and probably legal) obligation to seek out other work-related tasks: that's what he was being paid for. Had he done so, he might have earned better performance reviews than 'satisfactory' and 'above average,' and he'd probably still have his job."

Although these sentiments were echoed in a number of other responses, many others who wrote in to defend Schmidt made the connection with blue-collar work issues explicit. "I can remember years ago my dad telling me about the crane operators that worked on the landfill in Staten Island," wrote Bill. "Their job was to load a certain number of garbage scows every day. The scows were barged out to sea, where the bottom of each one was opened and the garbage dumped to the ocean floor. When the cranemen were able to load the set number of scows in less than the eight-hour shift and wanted to go home, my dad was incensed. First, he was angry that these guys thought that they should get a day's pay for fewer hours than it took to do the job. Second, he told them that once it became known that they were being more productive that there would be an expectation that they should produce more. Perhaps management's problem was that if Schmidt could do his job in less time then maybe he could have done more...."

Jim was even more blunt in his critique: "Corporations maintain they are the judge and sole arbiter of how much time each employee must spend on work. Their lackey Congress concedes this right to them. The result is that Americans are working more hours than two decades ago, for less pay. But work time is not theirs to determine. They can ask for what they want, but the amount must be agreed to by negotiation with the workers themselves. The idea that corporations should control this work issue is dehumanizing and abhorrent."

Finally, for an interesting historical footnote on the question of "stealing time" from work, I recently ran across the following in Carl Sagan's *Broca's Brain*:

At the Patent Office, Einstein "soon learned to do his chores more efficiently and this let him snatch precious morsels of time for his own surreptitious calculations, which he guiltily hid in a drawer when footsteps approached." Such were the circumstances attending the birth of the great Relativity Theory.

"In 1905," Sagan continues, "Einstein published four research papers, the product of his spare time at the Swiss Patent Office." The papers, of course, included the famous equation $E = mc^2$ which, among other things, says that although energy and mass can neither be created nor destroyed, one form of energy or matter can be converted into another form.

Or, to put it another way, work is work.

-- C.G.

[Photo caption]

On the shop floor, wherever you are

[Photo credit]

Scott Van Osdol

Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives
(Rowman & Littlefield, 2000) by Jeff Schmidt

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What did that degree do to you?

The Ph.D. Trap Revisited by Cude, Wilfred, Dundurn, 2001, ISBN 1-55-002-345-4, price \$22.99, £11.99.

Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System that Shapes their Lives by Schmidt, Jeff, Rowman & Littlefield, 2000, ISBN 0-8476-9364-3, price \$26.95, £20.95.

Reviewed by Brian Martin

Brian Martin is an associate professor in Science, Technology and Society at the University of Wollongong, in Australia. He has a PhD in theoretical physics from the University of Sydney.

Credentials are at the core of higher education. A bachelor's degree or, better yet, a doctorate are valuable to their possessors, while for universities it is crucial to be able to award them. Indeed, without a government-protected monopoly over the right to award degrees, universities would virtually collapse. If any small business could grant Harvard or Oxford degrees, what would be the point of having the real thing?

This question highlights the symbolic importance of degrees. If the main value of studying at Harvard or Oxford were what was learned, then having this learning certified with a degree would be superfluous. In reality, degrees often become more important than the learning they are supposed to represent. Why would a student cheat if the only purpose of enrolment was learning? Take away the degrees and any other certification of attendance or performance and possibly nine out of ten students would quit immediately.

Having an appropriate degree is essential for obtaining certain types of jobs, most obviously in law and medicine but also in many other fields. Prospective academics are usually expected to have PhDs, and a professor without even an undergraduate degree

is a rare specimen indeed, irrespective of how much learning a person might have acquired independently. Universities are at least consistent, dispensing "meal tickets" for other occupations and expecting their own teachers to have them as well.

Marxists have analysed the role of schooling in the "reproduction of the class structure," namely providing a way to maintain social stratification that seems legitimate to everyone concerned. As near-universal education through high school has become the expectation in many countries, the task of legitimating economic inequality has increasingly fallen to universities, with a first degree being expected for ever more occupations. It is not hard to develop arguments against this trend, for example that most learning in higher education is not relevant to the jobs for which it is a prerequisite, that the quest for credentials undermines the intrinsic motivation to learn, or that remaining in educational institutions for so many years produces burnt out conformist students whose sparks of independence and creativity were extinguished long ago.

Although academics are noted for their willingness to critically analyse every sphere of endeavour, scrutiny of the credential system is unusual, since it strikes at the heart of academics' status and privilege. One of the most powerful critiques is Randall Collins' *The Credential Society* (1979). Collins argued that little is learned in schools, with most learning occurring on the job. Indeed, grades are not good predictors of subsequent success in any occupation -- except academia. Collins argued that education has not increased social mobility, since cultural goods, namely what it takes to succeed in school, are passed from parents to children more readily than economic and political resources. Educational stratification links together the realms of material production and cultural domination, creating a "sinecure society."

A few years earlier, Ronald Dore (1976) described the explosion of formal education in Third World countries, mainly due to the role of credentials in regulating entry into modern sector jobs. The enormous expansion of the education system is a response to parent and student pressures, but is highly wasteful when there are insufficient relevant jobs for graduates. In late-developing countries, Dore found wide use of educational certificates for occupational selection, massive inflation in qualifications and emphasis on examinations at the expense of genuine learning. With higher education today treated like a business with a large

"export market" (Third World students attending First World universities), Dore's critique seems just as relevant as it was a quarter of a century ago.

Whereas deschoolers such as Ivan Illich (1971) received considerable public attention in the 1970s, critics such as Collins and Dore have been largely ignored. While there has long been soul-searching within academia, for example over social irrelevance, declining standards, commercialism and managerialism, it seldom focusses on credentials. Therefore it is worthwhile looking at two recent books that zero in on this issue.

Wilfred Cude is a Canadian literary scholar who, as a result of his own unpleasant experiences while trying to obtain a PhD, turned his critical gaze on the degree. In 1987 he self-published *The Ph.D. Trap* and, after updating and adding new material, found a commercial publisher for *The Ph.D. Trap Revisited*, twice the size of the original (Cude, 2001). What exactly is the "trap" to which Cude refers? For prospective PhD students, it is an incredibly long journey with no guarantee of arrival. For US science PhD students in 1995, the average elapsed time from beginning (after the previous degree) to end was 8.4 years, while for humanities the average was an astounding 12.0 years. Years enrolled and elapsed time for completed doctorates have both been steadily increasing in the past several decades. Cude wants to warn potential students that embarking on a PhD course may not be the best way to get ahead, especially as many drop out along the way. Doctoral study is hazardous intellectually as well, encouraging a narrow conformity through the dissertation topic as well as acquiescence to supervisory demands and whims. This is useful training in conformity. Why then should the PhD be the entry requirement for undertaking innovative research and for teaching undergraduates?

The PhD, for Cude, is also a trap for society as a whole, given that enormous social resources are devoted to training PhD students, with dubious returns. He argues for validation of alternative career paths, such as second master's degrees and teaching internships.

The Ph.D. Trap Revisited ranges much more widely than its title would suggest. Cude examines the history of universities, early criticisms of the doctorate and methodological conflicts within disciplines. He tells the sad stories of research students who tried

to challenge the way they were treated and offers a few success stories of scholars whose work was recognised and who obtained good academic jobs despite their lack of a doctorate.

Cude's writing is engaging throughout, and even his harshest comments are phrased elegantly. He gives special attention to the humanities, where he is especially scathing. Acknowledging that science PhD graduates from prestigious universities may have learned something and made a contribution to knowledge, he says "A person with the Ph.D. in most areas of the humanities or social sciences, however, especially when acquired from any of the less prestigious universities of the United States, Great Britain, or Canada, has probably demonstrated only tact, tenacity, and a high tolerance for exotic cerebral sadomasochism. Such a person will probably not make any contribution to the advancement of knowledge, and might well teach in a manner deterring those who could." (p. 309). As Cude says, "Very few tenured [academics] would trouble themselves over a book like this." (p. 302). Who indeed would like to contemplate the possibility that the years that they had toiled to obtain a PhD had been a wasteful and limiting process?

A different critique of credentialing is provided by Jeff Schmidt in *Disciplined Minds*, a powerful dissection of professionals, with the chief charge being that they are selected and moulded to have system-reinforcing attitudes, thereby directing their creative energies to system-specified tasks, where "the system" is the current set of power relationships in society. Schmidt's first task is to show that professionals such as doctors, lawyers and scientists are timid personally and politically. More specifically, while they may take enlightened stands on distant social issues, they are uncritical on the job, for example being against democratisation. A key concept in *Disciplined Minds* is ideological discipline. Schmidt argues that the training of professionals serves above all to make them able and willing to operate within their employer's value system. In short, professional training is a form of ideological indoctrination.

Schmidt, a physicist, gives many examples from scientific research. He describes how scientists' curiosity is oriented in certain directions by funding and job opportunities, for example research grants from the military, yet researchers prefer not to acknowledge their service to external goals. Schmidt says that researchers have "assignable curiosity," namely a willingness to

orient their intellectual energies in whatever direction funding might dictate. That makes them ideal intellectual tools for those groups with power and money.

How do professionals become this way? Nearly half of *Disciplined Minds* is devoted to selection of professionals. When students enter professional training, many of them are optimistic and idealistic. On leaving they are "pressured and troubled" (p. 120), willing to join occupational hierarchies. Professional training has transformed the students' attitudes -- and this transformation, Schmidt argues, is training's key role. He gives special attention to examinations, with a case study of the PhD qualifying examination. (The equivalent in the British system would be the honours year.) The examination, Schmidt claims, is a social framework endorsing the status quo. He shows this by looking at the exam as a whole, at the collection of problems and at particular questions.

For example, often it's necessary to study earlier exam papers in order to learn how to answer "trick" questions. By accepting this, students submerge their natural curiosity in the field and learn to direct their attention to problems set by teachers, however irrelevant or contrived. In this way, the exam system favours those least critical of the status quo.

While those familiar with quantum mechanics will enjoy his analysis of a trick question on a qualifying exam, *Disciplined Minds* is not at all a technical book, with examples from various professional fields and long extracts from letters he has received from reflective students.

In professional training, there are some who drop out along the way. Indeed, since professionals have high status and incomes, there are many more who aspire to join the ranks than there are positions. If all those who failed to make it became rebellious, the system of professional privilege would be unstable. Schmidt accordingly spends time describing how losers are "cooled out," by being led to believe that failure is their own responsibility. In this, an ideal mechanism is an exam that is biased -- especially in fostering conformity -- but appears nonpartisan.

Even more provocative than his analysis of professional selection is Schmidt's advice on resistance. He draws on a US military antibrainwashing manual to give hints on resisting professional

indoctrination. He concludes the book with a list of 33 suggestions for radical professionals, ranging from encouraging colleagues to connect with radical organisations to refusing self-identification as a professional.

For those seeking a radical critique of professions, *Disciplined Minds* should be added to a select list including works by Collins (1979) and Illich et al. (1977). In comparison with other studies, especially work in the sociology of professions, Schmidt's book is far more hands-on. He is a genuine radical insider telling what it's like and what you can do about it.

In order to better understand the strengths and weaknesses of both *The Ph.D. Trap Revisited* and *Disciplined Minds*, it is useful to compare the books on a number of fronts. What they have in common is an acute awareness of the limitations of professional training, especially the training of academics. They each draw attention to the way that research degrees lead to conformism rather than creativity. They each point to the conservatism of successful academics, at least within the academic system. They each deplore the massive waste of talent as well as the destruction of idealism in the credentialing process.

However, the purposes of their analyses are rather different. Cude's purpose is to show the limitations of the PhD as a training mechanism, whereas Schmidt's is the broader task of revealing how professionals become so timid politically and intellectually. Cude's goal is reform of the PhD system, whereas Schmidt seeks to encourage radical professionals to be part of a wider process of egalitarian social change. Given these divergent purposes, the commonalities in their criticisms of the credentialing process are striking.

Cude, a humanities scholar, writes in elegant essay style, drawing on classic works in a discursive fashion in order to reveal the intellectual continuities in critical perspectives on the PhD. Cude builds on earlier critiques in order not to appear too radical himself. Schmidt, a scientist, essentially has designed his own intellectual framework from first principles, rather analogously to the way a theoretical physicist would start with a set of equations (such as Maxwell's equations for electromagnetism) and derive consequences. This makes Schmidt's work much more original, but by the same token he does not situate it within the large literature on the sociology of education and the sociology of

professions (e.g., Collins, 1979; Larson, 1979), as well as works on the "new class" or professional-managerial class (e.g., Ehrenreich and Ehrenreich 1979; Gouldner, 1979). For some readers that will be a weakness in Schmidt's book, but perhaps his independence of earlier scholarship -- given that he has read into these literatures but decided that they do not add to his perspective -- are part of what it takes to produce such an original analysis.

Both authors focus on the North American experience, using frameworks and examples close to their own experience. Credentials and professional training are different elsewhere, to a greater or lesser degree. Readers will need to use their judgement about how much of these critiques apply in other systems.

Both Cude and Schmidt are fascinated by dramatic expressions of frustration by disgruntled students and academics, giving examples of research students who either committed suicide or killed their supervisors, or both. Both authors look at the credentialing process from the point of the view of the student and both are attuned to the enormous waste and frustration involved, perhaps leading them to expect and notice those few cases where frustration manifested itself as violent rage. Their books, in their own ways, show why such rage is predictable. Perhaps the surprising thing is that there is relatively little violence!

Whereas Cude's personal experiences led him to write his book, with Schmidt the sequence was reversed. Employed as an editor at *Physics Today* for 19 years, he was dismissed after his employer saw *Disciplined Minds*. That's one provocative book!

It is hard to read these books without asking, "What did doing my degrees do to me?" and becoming either defensive or self-satisfied. Both Cude and Schmidt would like readers to ask the question and be self-reflective but then to go out and do something about the problems. The credential system is enormously powerful and is not going to change quickly. But for those who want to be more aware and make a personal contribution to change, these books are good places to start.

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*Disciplined Minds: A Critical Look at Salaried Professionals
and the Soul-Battering System that Shapes their Lives*
(Rowman & Littlefield, 2000) by Jeff Schmidt

Public Citizen News
September/October 2000
Volume 20, number 5, page 15
Published by Public Citizen
(founded by Ralph Nader)
ISSN 0738-5927

Recommended reading . . .

Closed Minds

Recommendation by Carrie Crystal Van Driel

Professionals within our society are considered the most able, those who make things happen. But as Jeff Schmidt notes in his book *Disciplined Minds*, these over-trained doers are really just products of what corporate America is looking for -- people who will do the job as trained without challenging the system.

Schmidt focuses on the idea that not only do employers look for people who are technically trained but also people who are trained to go with the flow without rocking the boat or questioning authority.

Written for professionals and students looking to become professionals themselves, *Disciplined Minds* provides an insight into a world where creative minds are subdued. Through first- and second-hand experience, Schmidt analyzes the true meaning of being a professional and the sacrifices that professionals make to achieve their career goals. He challenges them to think outside the box -- to use their intuition and their attitude to provide for a better society.

Politics and Prose bookstore
Washington, D.C.
Suggested reading
Summer 2000 issue

...Local author Jeff Schmidt has written on a slightly different topic. **DISCIPLINED MINDS** examines why the most highly educated groups of people in our society, "professionals," are frequently among the most conservative. From his definitions of conservatism to his vision of why graduate schools foster and develop elitism, Schmidt shows that the process of graduate education, and the subsequent quest for fulfillment in a soul-deadening work environment, contributes to the inability of professionals to creatively express themselves. This book should be read by anyone thinking about embarking on a professional education in any field, as well as by those who wonder why their dream job doesn't seem so dreamy after all.

-- Andrew Pollock

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Tue 21 Jan 03 11:09 -500 GMT Home >> Resources: Books SITE I

RESOURCES**BOOKS**

With the gift-giving season nearly upon us, IEEE Spectrum editors were polled for their best bets from the last 12 months of books

Editors' Picks

ENGINEERING

Inviting Disaster: Lessons from the Edge of Technology

James R. Chiles HarperBusiness, New York \$28

Usually more than one thing has gone wrong when a catastrophe affects our technologically complex world. This collection of short and usually understandable descriptions discusses the causes of such tragedies as the Challenger space shuttle disaster, the sinking of the Ocean Ranger oil-drilling rig, the Concorde crash in Paris, the faulty mirror in the Hubble telescope, the fiasco of the U.S. Navy's Mark 14 torpedo failures early in World War II, and many more.

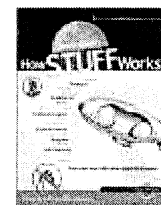


AR

How Stuff Works

Marshall Brain, Hungry Minds, New York \$24.99

A good reference and a good read, How Stuff Works presents clear, well-illustrated explanations of how things work. Airplanes, cruise missiles, hybrid cars, batteries, file compression, digital cameras, routers, microwave ovens, sunglasses, radio-controlled toys, and more are covered. The book makes complex ideas interesting and understandable to adults and kids alike.



EAB

Exposing Electronics

Bernard Finn, editor, Gordon & Breach Science Publishing, Newark, N.J. \$23

Electronic artifacts are preserved in collections around the world. Finn's focus is the process by which they are collected and the museums in which many of them are kept. But his book is worth the price just for the high quality of its historical images and photographs of exhibits.

HG

MILITARY

Weapons in Space

Karl Grossman, Michio Kaku, Seven Stories Press, New York \$6.95

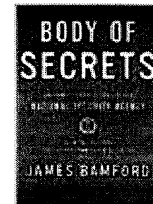


Published almost a year ago, *Weapons in Space* examines the 1967 Outer Space Treaty and the history of the Global Network against Weapons and Nuclear Power in Space. The Outer Space Treaty was created to ban space-based weapons of mass destruction and has been ratified by over 60 nations. The global network, founded in 1992, opposes the use of nuclear materials in space, even as a power source for interplanetary probes. At 80 pages, *Weapons* is no weighty legal tome but a speedy read and a useful introduction to the political backdrop to military and nuclear activity in space for the last three decades.

EAB

Body of Secrets

James Bamford, Doubleday, New York \$29.95



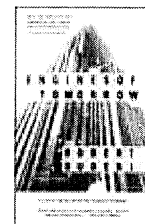
With a staff of 38 000, the National Security Agency not only dwarfs the Central Intelligence Agency, but is the largest and most powerful intelligence agency in the world. Bamford's detailed examination of the U.S. agency and its reliance on satellites and the Internet for surveillance lifts the veil that normally shrouds its activities.

AR

CAREER AND BUSINESS

Engines of Tomorrow: How the World's Best Companies Are Using Their Research Labs to Win the Future

Robert Buder, Simon & Schuster, New York \$27.50



Former *Business Week* technology editor Robert Buder takes a serious look at the role corporate research plays in long-term business success. Despite a perception that such activity has been dramatically scaled back in recent years, Buder proves the opposite is true by taking us inside facilities at nine of the biggest innovators in the United States, Europe, and Japan: IBM, Siemens, NEC, Lucent Technologies, General Electric, Hewlett-Packard, Xerox, Intel, and Microsoft.

HG

Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives

Jeff Schmidt, Rowman & Littlefield, Lanham, Md. \$26.95

Schmidt offers a provocative critique of how scientists, engineers, and other professionals are groomed to fulfill a specific function in society--that of maintaining the status quo--and, in the process, end up sidelining their own goals and ideals. The book is both well researched and highly readable. Some readers may disagree with its conclusions, but everyone will recognize its descriptions of the often wrenching choices that today's professionals must make.

JK

SOFTWARE

Go To: The Story of the Math Majors, Bridge Players, Engineers, Chess Wizards, Scientists and Iconoclasts Who Were the Hero Programmers of the Software Revolution

Steve Lohr, Basic Books, New York \$27.50



Go To surveys the history of modern software, from the creation of the first successful high-level language, Fortran, and its compiler in the 1950s, through to the open source movement of today. The development of Unix and C, the rise of the graphical user-interface, and the creation of the spreadsheet are included among the events that shaped modern computing. Although some will argue with the choices of topics covered--for example, an entire chapter is devoted to Java, while no mention is made of the development of the Internet protocol--the book is full of fascinating details about an intangible creation that has had a very tangible impact on the modern world.

SAC

TRANSPORTATION

Free Flight: From Airline Hell to a New Age of Travel

James Fallows, Public Affairs, New York \$25



When published in June, Fallows' idea of developing a network of small air taxis, to be hailed like a cab at the airport arrivals curb, was dismissed by some in the industry as somewhat far-fetched and totally impractical. But in the aftermath of 11 September, private and corporate jet use is on a hot growth streak. The plane-taxi idea may not be a winner, but the notion of using smaller jets, booked as one might a car or rail cabin, is worth exploring.

EAB

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Moon Lander



HOT TYPE

Physicist Examines 'the Soul-Battering System' That Envelops Professionals, Including Academics

By JEFF SHARLET

STEAL THIS BOOK: **Jeff Schmidt** did. "This book is stolen," the *Physics Today* magazine editor declares at the beginning of his new work, which he wrote on the job when his bosses weren't looking. "Written on stolen time, that is."

Mr. Schmidt acknowledges that at first glance, his book could also be seen as an exercise in bait-and-switch. With the title, *Disciplined Minds*, in bold letters on the spine, and the category "Careers" stamped on the back cover, the book will no doubt attract the attention of hard-working professionals eager for an edge over their competitors -- we mean, colleagues.

But Mr. Schmidt's subtitle -- *A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes Their Lives* -- tells a different tale.

He envisions the readers of *Disciplined Minds* (**Rowman & Littlefield**) not as ladder-climbing careerists, but as "dissatisfied professionals and disillusioned graduate students -- the majority."

Maybe you can identify. Mr. Schmidt believes that most people enter the work world or graduate school with the belief that their labor will be of social value. More often, they find that it's of only economic value -- and not primarily to them. The hierarchies of professionalism leave them alone on their ladders, afraid to make a change.

If that sounds bleak, he has the solution. After examining the worlds of work and education with an eye for the political, he concludes with "Now or Never," a 33-point manifesto for changing the world, or at least your office.

It's not rocket science, says Mr. Schmidt, who earned his Ph.D. from the University of California at Irvine. Form a union, fight elitism, and "undermine management's information advantage."

Sound like hard work? You're already doing it. For laborers in academe, Mr. Schmidt recommends reading "the weekly intelligence report for university bosses," *The Chronicle of Higher Education*.

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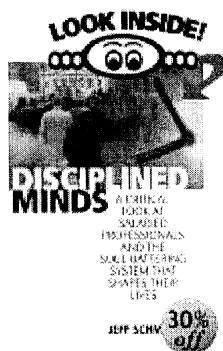


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This book details the battle one must fight to be an independent thinker in today's corporate society.

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★★★★★ **A must read for all students**, January 10, 2003

Reviewer: **menubia (see more about me)** from Orange County, CA

It took me three days to read this book. I could not put it down...I took it with me everywhere and have told everyone I know about it. The level of insight into the motivations of professional training schools is right on the mark. I am currently a graduate student as well as an employee at a major university. I can see first hand the professionalization (read indoctrination) of the graduate student. I can also see with more insight the dynamics that go on in an academic office. I now understand why those in charge of forwarding the ideology of the office are not micromanaged, and those not trusted to forward the accurate ideology are micromanaged. Dr. Schmidt also does an excellent job in describing the role industry and the military has in professional training programs. A professional schools is seen as an extention of the profession, not an extention of the educational institution in which it is housed. There are tremendous forces pushing and pulling on professional training programs to produce the "right" kind of student. Unfortunately the force that wins out is the one with the money...private industry and the military. Students have to be aware that their very futures can be determined by what kind of funding a department receives.

He is right to say that if one does not remain connected to one's values and convictions, one can succumb to the whims of those in power. After depressing you with his accurate interpretation of the role professional schools play in society, he gives instructions on how to fight the indoctrination process.

I'm buying extra copies and giving them away as graduation gifts. A **MUST READ** for anyone who wants to survive professional school with their conscience intact.

Was this review helpful to you? ☒ yes ☐ no

3 of 3 people found the following review helpful:

★★★★★ **Excellent - incisive and long overdue**, May 31, 2002

Reviewer: **Jonathan Armstrong (see more about me)** from Denver, CO USA

First, Jason Hong's review must be addressed. Disciplined Minds is not a "Marxist" book in any way shape or form. It is more anarchistic, but only as Noam Chomsky would describe it: something that calls into question any sort of irrational authority and questions it.

Mr. Schmidt's witty analysis of two-year "professional training schools" - which he rightfully calls "professional rip-off academies" - is far from Marxist. Rather, Jeff rightfully recognizes that those employed in non-professional jobs view "credentialied" professionals as having a degree of freedom and prestige that they strive for, even though they might actually have a higher salary. The premise behind Disciplined Minds is that this perceived "freedom" professional jobs offer comes only after a series of tests are passed - successful navigation of secondary school, a four year bachelor's degree, and then proper professional credentials after that. Since professionals must operate with a high degree of autonomy, they must naturally be expected to not do anything that would upset the balance of power in their particular industry. When I was interviewing for jobs right out of college, there was little care paid to what my field of study was IN college - rather, it was whether or not I had a "four year degree". A "four-year degree" connotes a tacit acceptance of a certain worldview, a certain ability to know the consensus and abide by it.

Far from being just "objective indicators of knowledge", each rung on the ladder of professionalism carries a political component with it as well. It is those who buy into the system, and those who play by the rules, that will successfully climb this ladder. At each successive level - high school graduation, entrance into a four year college, and then a J.D./M.D./Ph.D after that, there is a successive weeding-out of those who are different, those who could pose a possible problem to maintaining the status quo.

Jeff does a superlative job at illustrating this by drawing heavily from his own area of study, physics. (Jeff has a PhD in physics and if Mr. Hong were to have actually read this book, he would've found Jeff saying that his own experience in grad school was highly rewarding - alas, he must have skipped this chapter.) The vast majority of physics grad students eventually find employment in the defense and aerospace industries, and the subtle weeding-out process that occurs is obviously going to favor individuals who do not see any consequence in building weapons of mass destruction. Such individuals are naturally going to perform better on tests that view knowledge as simply a series of reductionist hoops that have to be jumped through, devoid of any wider social or environmental context.

The only slight criticism of this book was that it could've drawn out more of a conceptual framework for its criticism, echoing a review I read of a (oh, the irony) "professional" sociologist who critiqued it for not being "sociological enough." However, this book was written for a wider audience and I am glad it didn't get relegated to the academic social science scrap-heap. In short, this is

an immensely readable and convincing piece of social science in the finest C. Wright Mills tradition, destined to strike a nerve.

Was this review helpful to you? ☒ yes ☐ no

3 of 3 people found the following review helpful:

★★★★★ **Thought Provoking and Oh-So-True**, April 2, 2002

Reviewer: **A reader** from Los Angeles, CA USA

...there is much more to this book than "a few nuggets ... hidden deeply beneath the author's severe distortations and biases".

The author's premise is that any professional's work is inherently political, and Mr. Schmidt efficiently proves this to be true even for the most seemingly "pure" sciences. And as it's prevalent among physics researchers, it is even more distinct for the corporate professional. While Mr. Schmidt's liberal views are a little over the top at times (particularly with the POW/professional analogy), to dismiss the validity of the premise because of his "Marxist" views is silly.

Recognizing the political nature of professional work is the first step. The professional's decision of whether to meekly accept that role for herself is another. Other reviewers may find nothing wrong with playing the part of a cog in a corporate or government machine. However, if the goals of that machine aren't aligned with the professional's own moral code, the professional is doomed to internal conflict and overall dissatisfaction with her career.

If you are a professional or are planning a career as a professional, this book is essential if you do not want to compromise your morals to a corporate/government purpose. This book shows you how to resist becoming a mindless "brick in the wall" and to maintain your identity in the face of a relentless attack on your individuality.

Was this review helpful to you? ☒ yes ☐ no

2 of 12 people found the following review helpful:

★★★★★ **Some Nuggets, Ultimately Unsatisfying**, February 11, 2002

Reviewer: **Jason Hong (see more about me)** from Berkeley, CA United States

If you are in grad school, and if you see the world through a Marxist framework, then you will probably be enthralled by this book. Otherwise, you will probably have the same response to this book that I did: that it has a few interesting parts, but that these nuggets are hidden deeply beneath the author's severe distortations and biases.

I don't dispute the author's facts. I also applaud his courage in many cases (e.g.

asking hard questions about nuclear weapons at physics grad school, and standing up for other fellow grad students). However, what I do dispute is his selection and interpretation of those facts.

By interpretation, I mean that the author had a foregone conclusion that he wanted to get to, and by selection of facts, I mean that he simply left out a lot of alternative viewpoints that did not fit within his Marxist framework, so that he always arrived exactly where he wanted to. For example, surely there are some people out there who have had positive and fulfilling grad school and professional experiences? Surely there are some advantages to having shared experiences and a common way of thinking, beyond "indoctrination"?

Of course, the rules the author has set up has a subtle trap. If you agree with him, then that's good, but if you don't and have an alternative viewpoint, then you are indoctrinated and part of the oppressive system, and therefore should be discounted.

Lastly, for a person that claims that he wants to try to make the system better for graduate students and salaried professionals, the author shows a surprising lack of compassion in his writing. In fact, it's not clear to me at all why he wrote this book, other than being (as one of my friends said) a "punk rocker" that wants to show that The Man can't keep him down.

Like I wrote at the beginning, there are a few nuggets here, with pointing out problems with the existing system, and especially with the grad school horror stories towards the end. Ultimately, though, it's unsatisfying because in a Marxist framework, reform is impossible. There can only be *resistance* and *revolution* towards an idealistic (and unattainable) world untempered by the often messy and pragmatic economic, political, and social realities in which we live.

Was this review helpful to you? ☒ yes ☐ no

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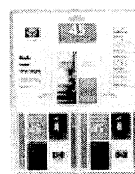
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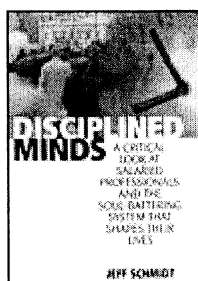
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Disciplined Minds: A Critical Look at Salaried Professionals and the Soul-Battering System That Shapes their Lives

By Jeff Schmidt



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"This book is stolen. Written in part on stolen time, that is. Because like millions of others who work for a living, I was giving most of my prime time to my employer..."

So begins Jeff Schmidt in this riveting book about the world of professional work. Schmidt demonstrates that the workplace is a battleground for the very identity of the individual, as is graduate school, where professionals are trained. He shows that professional work is inherently political, and that professionals are hired to maintain strict "ideological discipline."

The hidden root of much career dissatisfaction, argues Schmidt, is the professional's lack of control over the political component of his or her creative work. Many professionals set out to make a contribution to society and add meaning to their lives. Yet our system of professional education and employment abusively inculcates an acceptance of politically subordinate roles in which professionals typically do not make a significant difference, undermining the creative potential of individuals, organizations, and even democracy.

Schmidt details the battle one must fight to be an independent thinker, showing how an honest reassessment of what it means to be a professional in today's corporate society can be remarkably liberating. After reading this book, no one who works for a living will ever think the same way about his or her job.



About the Author

Jeff Schmidt was an editor at *Physics Today* magazine for 19 years, until he was fired for writing this provocative book. He has a Ph.D. in physics from the University of California, Irvine, and has taught in the United States, Central America, and Africa. Born and raised in Los Angeles, he now lives in Washington, D.C. You may write to him at jeffschmidt@alumni.uci.edu.

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Background info about Jeff Schmidt and *Disciplined Minds*

By Chris Mohr and Marlowe Hood
Former *Physics Today* staff members

In *Disciplined Minds*, Jeff Schmidt challenges professionals to view their role in society in a new and unsettling way. He argues that professional work has both technical and political components, and that salaried professionals are expected to be technically creative but politically subordinate. Such subordination does not occur without a fight, the book maintains, and so the workplace becomes a battleground for the very identity of the individual, as does graduate school, where professionals are trained.

Jeff has a PhD in physics from the University of California, Irvine, and he draws many of his examples from the predicament of employed physicists and physics graduate students. (In one chapter, he examines the physics PhD qualifying examination and shows how the ostensibly value-neutral test can identify candidates who will likely have a compliant attitude toward their employers.) His book details the battle one must fight to be an independent thinker and to advance one's own social vision in today's corporate society. It offers practical advice on how to make employment more than an exercise in knowing your place, and how to make graduate school more than an abusive "intellectual bootcamp" that breaks the individual in to playing a conventional role. You can avoid the cynicism and intellectual timidity that afflicts so many professional employees, he says, but doing so is not easy, and he discusses how it can be done.

While at *Physics Today*, Jeff played the most prominent role in staff efforts to improve working conditions, increase staff participation in decision-making, and broaden the range of viewpoints allowed in the magazine. He also led an effort to force *Physics Today* to live up to its advertised claim of being an affirmative-action employer, noting that the magazine was hiring and training only whites as editors, a pattern that eventually left the magazine with an all-white staff of 16 professionals and a non-white secretarial staff of 3.

In firing Jeff, the managers at *Physics Today* cited a statement, at the beginning of *Disciplined Minds*, that he had spent "some office time" writing the book. That constitutes "misconduct," they said. Jeff's colleagues, however, saw this charge more as a pretext to get rid of someone who was persistently pressing for changes in workplace policies. Indeed, the fact that the magazine's managers dismissed Jeff after so many years of service not only without a hearing, but also without asking him a single question about his work on the book, suggests that they were looking for an opportunity to remove him.

By the time *Disciplined Minds* was published, *Physics Today*'s managers had already tried unsuccessfully to silence Jeff with measures just short of dismissal. At one point, for example, they put gag orders on Jeff and another outspoken staff editor, warning that they would be fired if they said anything "counterproductive." These orders were eventually lifted due to pressure from coworkers. *Physics Today* even banned private conversations in the workplace, announcing that all conversations between staff members must be open to monitoring by managers. Jeff was not alone among his colleagues in finding these measures repressive.

The managers at *Physics Today* apparently thought the book would be perceived as so provocative that no one would object if they fired Jeff. They were wrong. Those lodging protests to date include sixteen former *Physics Today* staff members (including us), the National Writers Union, and 160 scholars, writers and educators in a wide range of fields. Even the State of Maryland, after an unemployment benefits hearing, rejected AIP's charge that Jeff's work on the book at the office constituted misconduct, finding that *Physics Today* fired Jeff without evidence that his spare-time writing interfered with his work for the

magazine. (During the years that Jeff was writing *Disciplined Minds*, *Physics Today* gave him two promotions and 19 salary increases based explicitly on the quantity and quality of his work for the magazine.) Details of the state investigation are posted on the Web at <http://disciplined-minds.com>, along with the protest letters, reports in the press and reviews of the book.

Physics Today has hired what union activists and labor lawyers describe as the most notorious union-busting law firm in the country (Jackson, Lewis, Schnitzler & Krupman) to deal with any legal challenges in this case. That's revealing, but it doesn't mean that the law is a likely source of justice for Jeff. The law generally favors employers, and so Jeff's best chance for justice is support from the physics community.

(The above is based on information from Jeff and other former *Physics Today* employees, and on relevant documents.)

14 January 2002

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Marc H. Brodsky
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American Institute of Physics
One Physics Ellipse
College Park, Maryland 20740

Dear Dr. Brodsky:

As physicists and other scientists concerned about freedom of expression in the science community, we were troubled to learn of your dismissal of Jeff Schmidt, who had been an articles editor at *Physics Today* magazine for over 19 years.

As we understand it, you fired Jeff after you saw his book, *Disciplined Minds*, and in particular after you learned that Jeff had used some of his spare time at the office for critical writing about education and employment in physics and other fields.

While we do not necessarily agree with Jeff's views about the situation of physicists and other salaried professionals, and do not expect you to, we believe that free debate within the physics community is healthy. We expect you to encourage it, not stifle it, especially because physicists are known for speaking out when physicists internationally are punished for expressing their views. Your actions as head of the American Institute of Physics help to shape society's view of the physics community. We urge you to reconsider your decision, and offer to reinstate Jeff as an editor at *Physics Today*.

We ask that you publish this letter in *Physics Today*, to bring our concerns to the attention of the wider physics community.

Sincerely,

(This letter expresses the views of the undersigned;
affiliations are listed for identification only.)

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